The JOURNAL OF HIGHER EDUCATION

MARCH
1934

VOLUME V
NUMBER 3

THE JOURNAL OF HIGHER EDUCATION is published to serve as the professional journal of the sixty-seven thousand instructors and administrative officers in the colleges, universities, and professional schools of the United States. Among the associate editors there are representatives from every department of academic responsibility in higher education. With their assistance the editorial staff seeks nine times a year to bring to its constituency reports of the most significant investigations in the instructional, administrative, personnel, and curricular problems in all branches of higher education.

EDITORIAL STAFF

W. W. CHARTERS, *Editor*

W. H. COWLEY
J. MACLATCHY *Assistant Editors*

F. LORD, *Business Assistant*

ASSOCIATE EDITORS

W. C. BAGLEY
J. C. CHRISTENSEN
ALGERNON COLEMAN
WILLIAM LLOYD EVANS
CHRISTIAN GAUSS
ESTHER ALLEN GAW
M. E. HAGGERTY
H. E. HAWKES
HENRY W. HOLMES
CHARLES W. HUNT
H. C. HORACK
FRED J. KELLY
ARTHUR J. KLEIN
A. C. KREY
L. C. MARSHALL
J. P. MITCHELL
THOMAS V. MOORE
SHELTON PHELPS
WILLARD C. RAPPLEYE
FLOYD W. REEVES
PETER SANDIFORD
CARL E. SEASHORE
JOHN SHAPLEY
LOUISE STANLEY
E. N. TRANSEAU
B. L. ULLMAN
LUTHER WEIGLE
ERNEST H. WILKINS
JESSE FEIRING WILLIAMS
C. C. WILLIAMSON
JAMES M. WOOD
GEORGE A. WORKS
C. S. YOAKUM

··ıı CONTENTS ıı··

OPEN-BOOK EXAMINATIONS 117
JOHN M. STALNAKER AND RUTH C. STALNAKER

Mr. Stalnaker, in collaboration with his wife, presents here the case for open-book examinations. The authors are in the examining office at the University of Chicago.

MASTERY IN COLLEGE EDWARD WILLIAM DOLCH 121

The effort involved in requiring all the students in a group to master the subject-matter of the course is not too great a price for the higher standard of instruction. Mr. Dolch is Assistant Professor of Education in the University of Illinois.

CHANGING SOURCES OF UNIVERSITY ENDOWMENT 125
JOHN H. PRIME

To be educationally sound an institution of higher learning must be financially sound is the opinion of this Assistant Professor of Finance in the School of Commerce, Accounts, and Finance, New York University.

THE CHARLES WILLIAM ELIOT CENTENNIAL 129
LUTHER E. WARREN

A professor of Mt. Union College gathers from Mr. Eliot's letters an account of some of the early innovations which he made in the practices of higher education.

STUDENT-TEACHER RAPPORT ALFRED R. ROOT 133

Attitudes of students toward the teachers and teachers' attitudes toward the students can be changed. Mr. Root, Associate Professor of Psychology at Hamline University, has assembled data here to prove his contention.

NEW WAYS OF ORGANIZATION CLARENCE LEUBA 136

The plan of independent study here described allows savings in the instructor's time and provides opportunities for the effective training of students. Mr. Leuba is Associate Professor of Psychology at Antioch College.

PERSONNEL ADMINISTRATION ESTHER LLOYD-JONES 141

The Director of the Guidance Laboratory, Teachers College, Columbia University, here describes what student-personnel administration is and shows its relation to general administration and to other personnel services.

[Continued on the Next Page]

CONTENTS (*Continued*)

BETTER ENGLISH — SADA A. HARBARGER AND WILLIAM H. HILDRETH — 148

The co-operative scheme for better written work shared by the College of Agriculture and Department of English, Ohio State University, is here described by the director of the project, Miss Harbarger, Assistant Professor in English, and the consultant, Mr. Hildreth, an Instructor in English.

WITH THE TECHNICIANS — 155

Scientific Method in Chemistry Laboratory and in Biology Instruction, Sectioning Students in French Classes, Adult Ability, Direct Prediction, Exemptions from Examinations, Unit-Cost Studies, "Gesamtkatalog der preussischen Bibliotheken."

THE REPORTER — 161

Anniversary at Temple, end of the "University Record," a new unit at Rutgers, the Casa de las Espanas, end of controversies in Oregon institutions, "Charters and Basic Laws of Selected American Universities and Colleges," aviation instruction at Kenyon, National Conference on the Education of Negroes, admission to Dartmouth, building plans at the University of Texas, a survey of building conditions in American colleges and universities, "hell week," military training abandoned at DePauw.

EDITORIAL COMMENTS — W. W. CHARTERS — 167

REVIEWS — 169

"The State and Higher Education: Phases of Their Relationship," by Fred J. Kelly and John H. McNeely; "Wallace Clement Sabine; A Study in Achievement," by William Dana Orcutt; "The Beginnings of Tomorrow," by Herbert Adolphus Miller; "Class Size and University Cost," by Floyd W. Reeves, Nelson B. Henry, and John Dale Russell; "The Oriental Institute," by James Henry Breasted; "A Platform for Life," by Ernest H. Wilkins.

IN THE LAY MAGAZINES — v

THE JOURNAL OF HIGHER EDUCATION is published monthly, except during July, August, and September, by the Ohio State University; 35 cents a copy; $3.00 a year (Canada and foreign $3.50). The address of the editorial and business office is Bureau of Educational Research, Ohio State University, Columbus, Ohio.

The Journal of Higher Education MARCH, 1934 II

Open-Book Examinations

By JOHN M. STALNAKER AND RUTH C. STALNAKER

The Case for Open-Book Examinations Involves the Importance of Knowing Where to Find Information, How to Evaluate It, and How to Use It

AN INSPECTION of college examinations, whether labeled comprehensive or not, and whether at the freshman or Ph.D. level, clearly demonstrates that the typical test question demands primarily the recognition or recall of simple isolated facts which, by judicious cramming, can be learned in a short time and forgotten in even less time. E. S. Jones[1] after appropriate reservations suggests that examination questions may be classified under three headings: primary factual questions, application and skill questions, and power or thought questions. Before a question can be classified under one of these heads, we must know how the course was conducted, for many apparent power questions demand merely the simple recall of what the lecturer has said. Furthermore, questions which appear to be thought questions are often marked chiefly, if not entirely, upon the accuracy of the facts presented. In other words, a thorough analysis of the type of question used, of the relationship between the questions and the course work, and of the method of marking the papers will undoubtedly show that what is being chiefly measured is the knowledge of simple, unrelated facts. Many so-called "thought questions" might be reclassified as factual questions if they were submitted to the test of the open-book method. Any question which can be answered correctly in the regulation time by the average student not trained in the subject, when the use of textbooks and notes is permitted, depends primarily upon factual knowledge of a relatively simple order rather than upon the understanding of methods and procedures.

[1] *Comprehensive Examinations in American Colleges.* New York: Macmillan Company, 1933. pp. 33–39.

That facts should be stressed is not in itself objectionable. The lack of knowledge of facts is responsible for many serious blunders on the part, not only of the college student, but of the business and professional man as well. Probably the most readily obtained index of a person's ability in a given field is his knowledge of the basic and detailed facts about that field. Nevertheless, the placing of the chief emphasis in the university classroom upon the acquisition of fact is not sound. If this were the sole end of education, there would be no justification for the elaborate instructional mechanism found in the American university; any student who wishes to absorb a large body of factual information can do so with the aid of a textbook. Most of what the college student memorizes he will quickly forget. Unless a student continues work in a field long enough to force a natural memorization of the basic facts, he will promptly forget them. What laws of exponents are remembered now by the student who once studied algebra, but who has not subsequently used it? What definitions learned for the examination in Economics I are now remembered, even on a recognition level? What formulas do the student of educational statistics now remember? They were probably never understood, but were memorized for the examination. Most of the subjects to which the student is introduced he will not encounter out of college. Most of the time he spends in cramming facts will be wasted, for the facts themselves will go; and the process of cramming is one which will have little application in the less artificial situations which he will meet, whatever be his future work—business, professional, or research.

That in committing to memory a vast number of facts, even though they be promptly forgotten, a certain mental training or discipline has been achieved is possibly correct. The question raised here is whether or not another type of examination might not encourage a method of preparation which is more significant, because it has greater practical application and at the same time has equal or greater value as mental discipline.

ONE of the easiest and most direct means of shifting the emphasis in college work from the learning of facts to the learning of procedures is to allow the student to bring his textbooks and notes to the examination and to make whatever use of them he wishes. The textbook and the notes should be used; that is the reason they were prepared. A premium will be placed upon concise, thorough, well-organized notes on lectures and readings. The only definitive characteristic of the open-book examination is that the student is allowed to use references, textbooks, and notes. It may be essay or objective, oral or written, laboratory or theoretical.

The values of the open-book examination are many. In the first place, it puts the emphasis upon the most vital objectives of the course—to teach the student to see situations in their entirety, to see relationships between facts, to utilize facts to solve problems, to evaluate facts, to

infer from one situation what will happen in a similar case, to organize facts from various sources.

It is probably true that there is a high correlation between the marks on a closed-book examination and those on an open-book examination. But the open-book examination will encourage, even force, a sounder type of preparation which will enable the student to appreciate the basic aims of the course. He will not be tempted to ignore his studies until the cramming sessions start a day or two before the examination. In general, he will learn the facts in acquiring the broader type of knowledge, for all knowledge is based upon simple facts; but his emphasis will not be upon memorizing what are to him simple, isolated, disconnected, even meaningless, bits of information. In as much as he will stress procedures and relationships in his study, he will necessarily have a sounder type of knowledge, for isolated facts are soon forgotten, whereas knowledge of procedures and relationships is more enduring.

The open-book examination presents a natural situation to the student, which rightly appeals to him. If, in the excitement of the examination, he forgets even a key datum, he may refer to his books. The student who thoroughly understands the subject is not penalized because he forgets a single detail. On the other hand, the student who does not have a thorough understanding of the subject cannot pass the examination, either by cramming enough facts or by hasty perusal of his textbooks and notes during the examination. He knows in advance that the examination will demand some ability to handle problems, and that this ability cannot be acquired in a few minutes.

A MORE careful formulation of questions is required by the open-book examination. Questions must be discarded which can be answered simply by reference to a textbook, or which require that the content of lectures be reproduced, for the student will be able, by referring to his notebook, to repeat even the instructor's pet phrases. There is no place in an open-book examination for the typical, "Discuss, giving references to specific————, the————," which in student language means to repeat what the teacher said about ————; nor for such science questions as: "What is soap and how is it manufactured?" "What is absolute zero?" "Define ampere, coulomb." To answer an open-book question may require the knowledge of what an ampere is, but it will require more. Facility in locating necessary information will be rewarded in the open-book examination. The ability to refer quickly and accurately to sources is obviously important.

The open-book examination would not necessitate the exclusive use of the essay question. Because objective questions show upon inspection, more clearly than essay questions, what is being measured, some educators believe that such questions test only fact. Most objective questions and most essay questions—as they are now written—do get at fact

exclusively. However, neither type of question is restricted by its form to factual material. The stereotyped question of either the essay or the objective form must be discarded, because excellent answers which would soon be available to the students would be taken to the examination.

The open-book examination is desirable because it tests the value of a course, encourages sound preparation on the part of the student, presents a more natural situation, and necessitates comprehensive thought questions. Why then are they not used? Possibly because although the open-book examination stresses the importance of knowing where to find information, how to evaluate it, and how to use it in problems, it minimizes the importance of memorizing facts. Probably a better answer is that the open-book examination demands that a course give to the student something more than fact; when examined on the basis of this criterion, many of our university courses are found wanting.

Open-book examinations will unquestionably be more widely used in the near future. Research is of course necessary to determine what they measure and the form of question best suited to them, and to solve many other problems. Even before experimental work has established the value of these examinations, the study of the logic underlying them suffices to convince one that the open-book examination is sound.

Mastery in College

By EDWARD WILLIAM DOLCH

The Lesson to Students—"Nothing Is Done until It Is Done Right"

A RECENT experiment illustrates a way in which it is possible to apply in certain college courses several of the most modern principles of teaching without disrupting usual college routines or placing too heavy burdens either on instructors or on students. One of the principles referred to is that of mastery. It has long been recognized that nothing short of mastery of a subject should be tolerated at the university level, but the problem has been how to secure it. The other principle is that of adaptation to individual differences. It has been felt that application of this principle would require sectioning, tutoring, honors courses, or the like, but the experiment to be described shows that adaptation to individual differences can, in large degree, be achieved with the usual college organization.

The principle of mastery is simply that *no work is done until it is done right.* This is the universal principle in science, business, and industry. It should be the guiding principle of education, especially in the college or university. In a course in educational psychology this principle of mastery was applied in the following way. The work of each student in the course was conceived as the understanding of a set of problems involved in high-school teaching. In this experiment, fifteen such problems were used. Each student was required to show his understanding by explaining the psychology involved in each problem, and by giving an instance or illustration of it from his own school experience. Each paper was marked *A*, *B*, or *C*, or was returned without a mark. *C* meant satisfactory, and nothing less than a satisfactory explanation and illustration was accepted. For each paper returned without a mark, a blank was left in the record book. Certain office hours were posted during which the students could come in and re-write their papers, it being understood that they had previously restudied the matter until they had found where their papers were wrong or lacking. Each paper when re-written was received as "made-up," but it was not considered the equivalent of a successful first trial.

The difference between this method of requiring mastery and the usual procedure is fundamental. The usual method is to return unsatisfactory papers marked "poor" or "failure." Ordinarily the students merely look these papers over and then file them or throw them away. They cannot

change the marks, so they seldom look up and correct their errors. Instead, they hope to learn the needed information in some vague future or during the inevitable cramming before the final examination. In the case of poor students, these hopes are seldom realized, and a stiff final examination that demands real mastery of the material will be bound to fail students in large numbers.

IN CONTRAST, the method of requiring mastery just described did not result in a high percentage of failures in the course. Students were not allowed to go to the end of the course and then be ruthlessly eliminated. The papers that went back to each individual bore notation of how many blanks were still against him. All the work was made up; that is, everyone wrote a satisfactory explanation and illustration of each of the fifteen problems. This was a real accomplishment. When it came to the final examination, there were none of the usual gaps in knowledge or understanding. The mastery system demanded that each one keep at work on each problem until he had at least a minimum of understanding of it.

A most interesting result of this system was that out of 147 students who registered for the course, 11 withdrew, most of them during the first six weeks. These students furnished an amusing spectacle. They were bewildered. In this course there was no hope of "getting by" through a last-minute cramming or through luck on the final. Instead, there was a series of definite jobs which had to be done right. It did no good just to "hand in something" on the chance that it might at least get a *D*. The papers all came back. These students felt illtreated and withdrew in disgust.

Another interesting feature is the effect on the marking standard of the instructor. Under the usual system, the teacher tends to follow the class standard, that is, to call "satisfactory" the kind of work that most of the class does. Under the mastery system there was an instant shift to a more "absolute" standard. The question was, "Is this explanation and illustration satisfactory with respect to what the student ought to write, regardless of what the others wrote?" If most of the class got a thing wrong, it was too bad, but they all had to get it right before they were given credit for having done it. The following table shows the large percentage of papers returned as unsatisfactory in the experiment with the mastery system:

Sets of Papers	Per Cent in Each Set
Two	0–10
Five	11–20
Fifteen	21–30
Eighteen	31–40
Nine	41–50
Eight	51–60
Two	61–70
One	71–80

Each student wrote fifteen papers, but because the 136 students were in four sections, there were 60 sets of papers in all. The table shows the wide variation in the percentage of papers returned. If a problem was easy or the teaching effective, less

than 10 per cent of the papers might have to be returned for re-writing. If a problem was hard or the teaching not as efficient as perhaps it might have been, as high as 70 per cent of the papers might be unsatisfactory. Incidentally, the percentage of the papers returned on any problem is a valuable guide to the need for emphasis on that problem in later teaching.

Of the total of 2,040 papers written in all by these 136 students, 787, or 39 per cent, had to be re-written, and this means read over again by the instructor. Here is the factor that college administrators must control or provide for before they can get mastery by students or real efficiency in the teaching done by their staffs. Readers must be provided, or instructors must be willing or be required to read papers. Students learn by thinking, not by passive listening or by memorizing. Most of them will do little thinking unless they must write down their thoughts. And these writings must be read.

IT MAY be asked, What effect had this plan upon the final marks in the course? Above all, the effect was to make this marking more just and reliable. For each student there had been read at least fifteen papers on fundamental problems. These papers were only from two hundred to three hundred words long, but they gave an excellent basis of judgment. Then, too, many students had papers which they had to re-write. These each, in time, necessitated the appraisal of the instructor of at least one revision and sometimes required a conference with him about the revision as well.

The table which follows shows how much of this re-reading was done for different students:

Papers Re-written	Number of Students
None	1
One	4
Two	11
Three	18
Four	18
Five	12
Six	17
Seven	21
Eight	11
Nine	8
Ten	7
Eleven	3
Twelve	3
Thirteen	1
Fourteen	1
Total	136

Since all make-up writing was done in the office, there was much conferring on matters aside from the papers, and the instructor became personally acquainted with all of the 136 students in the group. It is interesting to note that only one student got all problems right the first time, and that one had to re-write fourteen out of a possible fifteen.

Since all students wrote on all problems satisfactorily either on the first or on later trials, it might be thought that all students would have passed the course. Now, if passing had been based upon mere memory of situations, all might have passed, since the poor students had been compelled to secure solutions from the textbook, from the instructor, or from other students. But instead, the power of applying knowledge was also required in this course. Under

the mastery system just described, the final examination did not have to review the course in the usual sense, but it could require an application of the principles of the course to new situations. In these applications, the poor students again showed their inability to think with the materials they had in mind. As a result, about the usual number were failed or given low marks, though upon a different basis than the one that may be used under the ordinary system.

SO FAR, the material described has provided for individual differences only in giving more time and opportunity for the poorer or slower part of the group, but provision was also made for the upper end, or the better students. It was explained to the classes that the satisfactory or even excellent explanation and illustration of the fifteen problems was more or less of a minimum. Good work on this minimum was entitled to a mark of "good," or *B*. If the student wished an honor grade, or *A*, he had to demonstrate his ability further. It was explained that the excellent worker always does both more and better work than others. Therefore, the student could try for an *A* by preparing a paper or report upon some topic of the course or some application of the course. It was urged that this paper be done for its own sake, since the writing of a paper was no guaranty that a higher mark would result. Of the 138 students, 13 wrote papers, in most cases, on subjects in which they had acquired a genuine and deep interest. Three of these were not of *A* quality. Strangely enough, there were a number of other students who, in the opinion of the instructor, certainly could have written excellent papers, but who did not think it worth the trouble to do so. They frankly said they were satisfied with a *B*, because other activities did not permit them to take the time to write a paper.

The simple variations from ordinary teaching methods just described did secure both mastery, as far as the time permitted, and adaptation to individual differences. The cost was the re-reading of 787 papers, numerous conferences, and the reading of the term papers offered for the honor marks. Surely, this cost is not too much for the higher standard of instruction, and for the lesson to the students that "nothing is done until it is done right."

Changing Sources of University Endowment

By JOHN H. PRIME

Permanent Sources of Endowment the Sine Qua Non of Present-Day Universities and Colleges

THE current economic depression has changed considerably the importance of present sources of university endowment. The day has passed when institutions could turn to individual philanthropists and to foundations for financial support in the form of large donations. The universities and colleges must seek new sources of endowment.

President Butler, of Columbia University, recently declared that "an era of large scale philanthropy" has closed and that in the future the university must depend on small gifts. This statement by the president of the university which, next to Harvard and Yale, has the largest endowment of any privately controlled institution of higher learning in the United States is extremely important. It presents the problem which is uppermost in the mind of practically every university and college president in the country. Educational administrators are concerned about the endowment of their respective institutions no matter how large or how small the endowment. There are few college presidents who will admit that their institutions have adequate endowment as a source of income. They are all seeking additional endowment in order to increase the income. Because of present economic conditions this problem is more acute than ever before.

To what source must universities look for future endowment? The consideration of this problem involves two preliminary questions. To what extent are universities and colleges dependent upon endowment for support? From what sources is university endowment coming? To what extent are privately controlled institutions dependent upon endowment for their support? Privately controlled universities, colleges, and professional schools are primarily dependent upon gifts, endowment, and students' fees for their support. As gifts are rather spasmodic, it is upon endowment and students' fees that the institutions must depend for their steady incomes. During the period 1921–30, tuition fees provided 20.1 per cent and endowment 15.3 per cent of total receipts. Noneducational miscellaneous sources provided 64.6 per cent. In view of the fact that so small a part of the total income was derived

from tuition fees and especially from endowment, and because of the need for additional income to meet the rising costs of education, it has become necessary to increase the productivity of these two sources. Additional income has been sought by increasing the tuition fees and by securing more endowment.

While universities and colleges have increased tuition fees they have not raised them to the point where the fees cover the cost of education. At the same time, in spite of the higher fees, the number of students attending universities and colleges has increased. A larger endowment has been needed, because it is impossible to continue to raise tuition fees and at the same time attain the ideals for public service of institutions of higher learning.

FROM what sources is university endowment coming? The establishment of endowments is possible only in a nation where great accumulations of wealth go hand in hand with a widespread spirit of public service. In the United States, philanthropy has played a most important part in the development of higher education through the financial support which it has provided. In fact, practically all the endowment held by private institutions has originated in philanthropy.

The main sources from which universities and colleges obtain endowment are gifts and bequests from individuals, alumni, and foundations. By far the largest amount of endowment originated in individual gifts and bequests. Gifts made by some of the country's richest men, Eastman, Duke, Harkness, Baker, have been exceedingly large. During his lifetime, George Eastman is said to have given away $100,000,000. His will donated an additional $12,500,000 to higher education. James Duke gave $80,000,000 to the university that bears his name. The contributions of Edward S. Harkness totaled $33,450,000, and George F. Baker gave over $15,000,000.

The alumni fund is also growing in importance as a source of endowment because of its underlying principle, that small gifts given regularly each year by a large number of individuals equal the annual interest derived from one large gift from one benefactor. An annual contribution of $3 from each of one thousand alumni is equal to the interest on a gift of $50,000 invested at 6 per cent. Yale was one of the first universities to establish an alumni fund. This was organized in 1890 for the purpose of procuring from every alumnus an annual gift for general university use. The Yale Alumni University Fund, up to 1932, received a total of $10,281,152 of which $8,332,568 was from contributions and bequests; $1,915,085 was interest on the principal of the fund; $33,498 was profit from the sale of securities. Of this total, $5,439,748 has been given to the University for income. Other prominent alumni funds, more recently established, are the Cornell fund, 1913; the Dartmouth fund, 1915; the Columbia fund, 1919; and the Harvard fund, 1925.

The foundation as a source of endowment represents the development of a "science of giving." While the foundations have responded gen-

erously to appeals for financial aid, the privately controlled institution must not fail to recognize the changing attitude of foundations toward these appeals. The growth of many universities has been wholly by accretion. This growth has led many institutions to appeal to the public for funds in amounts that, before the World War, would have been considered out of all proportion to the ability of the public to give. Institutional rivalry has played an important part in this growth, because each university has tried to cover the entire field of knowledge. Research has been attempted by nearly all the universities, and much of this research has been of questionable value. As a result, appeals for endowment, especially for research, are being more carefully scrutinized by the foundations. Since 1926, the General Education Board has changed its policy of contributing to university and college endowment in general and has devoted its gifts to the support of specific projects. This change in policy was prompted by the following reasons:

> In the first place, the interest of alumni and the general public has been thoroughly aroused; the stimulus, once required in the form of a conditional appropriation, is no longer generally essential. Again, in so far as the difficulty has to be met by endowment, the sums needed are so large that such contributions as may be made by the General Education Board from its present resources are relatively less important. Finally, virtual withdrawal on the part of the General Education Board from this field may encourage college administrators to devise other ways of handling the problem than meeting the main part of the cost out of the income of the endowment funds.[1]

The appeals for endowment made to individuals, alumni, and foundations have come from public as well as from private institutions. These appeals have not fallen upon deaf ears for both have received support from private benefactors. While private institutions have received the bulk of donations from private benefactors, such donations have represented an increasing percentage of total receipts for public institutions and a decreasing percentage of total receipts for private institutions. The increasing extent to which public institutions have been the recipients of private philanthropy is a significant development. Private institutions must realize that, from now on, their appeals for endowment will compete with similar appeals from public institutions.

THE success which institutions have had in securing additional endowment is shown by the fact that the period 1921–30 witnessed a continual increase in the amount of endowment of publicly and privately controlled universities, colleges, and professional schools. The total endowment rose from $699,213,452 in 1921 to $1,137,675,733 in 1930, an increase of 92.7 per cent. The rate of increase of endowment for public institutions was 62 per cent, while the rate of increase for private institutions was 96.4 per cent. Although the average percentage of total endowment held by public and private institutions during the period 1921–30

[1]General Education Board. *Annual Report*, 1925, p. 6.

was 10.1 per cent and 89.9 per cent, respectively, the percentage held by the former declined from 10.7 per cent to 9.0 per cent whereas the percentage held by the latter rose from 89.3 per cent to 91.0 per cent. While the number of private institutions having less than $1,000,000 endowment has increased from 558 in 1921–22 to 652 in 1929–30, the percentage of the total number has steadily decreased from 84.4 per cent in 1921–22 to 78.4 per cent in 1929–30. The greatest increase was in the number of institutions having endowment between $7,000,000 and $7,999,999, followed by those having between $8,000,000 and $8,999,999, and those having between $3,000,000 and $3,999,999.

During the period 1921–30, public institutions with 10.1 per cent of the endowment enrolled 36.8 per cent of the student registration, while private institutions with 89.9 per cent of the endowment enrolled 63.2 per cent of the student registration. Public institutions have had a steadily decreasing percentage of endowment and a steadily increasing percentage of student registration, while private institutions have had a steadily increasing percentage of endowment and a steadily decreasing percentage of the student registration. Although the endowment per student has increased for all institutions, this increase has taken place entirely among private institutions. At the same time the income per capita for all institutions has steadily increased since 1921. The increase was greater, however, for private than for public institutions.

To what sources must universities look for future endowment? University and college administration entails two major problems: educational and financial. The former has received the greater part of the concentrated attention of college administrators, while the latter has been emphasized periodically by "drives" for immediately necessary funds. To perform their functions properly, institutions must be educationally sound and financially strong. The institution should be as greatly interested in its financial future as it is in its educational future. Our institutions of higher education must be organized upon a firm financial basis. This can be accomplished only by the development of financial programs and policies looking into the future and by the establishment now of sources from which income will flow in the future. Institutions must stop depending primarily upon "drives" and must build up permanent sources of endowment. For these sources they must look to interested individuals and alumni.

The Charles William Eliot Centennial

By LUTHER E. WARREN

The Debt of Medical Education to This Renowned President of Harvard

HIGHER and professional education in America owe their present standards to no one more than to Charles William Eliot. March 20, 1934, marks the centennial of his birth. When he came to Harvard in 1869, it was a small college with loosely appended professional schools. He left it forty years later a great university of which the professional schools were definitely and consciously a part. Some of the conditions which he strove to change are told in quotations from his writings.

In 1854, previous to his twentieth birthday, he wrote to his mother that his life work was to be in the field of education. Two years later while giving a course in chemistry in the Medical School, he was convinced that changes were needed.

While giving that course of lectures, I made thorough acquaintance with the methods of teaching which then prevailed in the Medical School. . . . I remember seeing on two occasions the condition of the paper of the manuscript lectures which Dr. Jacob Bigelow read every year to the medical class. The paper was brownish-yellow, although it had once been white. . . . In his hands the subject of materia medica underwent no change to speak of between 1815 and 1855.[1]

Such observations as these, together with others, Eliot remembered, and they were his grounds for action immediately upon his assumption of the presidency. He minces no words in discussing the Medical School, its organization and teaching, for this was one of his hardest problems.

It seems almost incredible that the grossly inadequate training above described should be the recognized preparation of aspirants to a profession which was once called learned, and which preeminently demands a mind well stored and a judgment well trained—a profession in which ignorance is criminality and skill a benefaction—a profession which penetrates the most sacred retreats of human love, joy, sorrow, and deals daily with the issues of life and death.[2]

And again,

I owe you an apology for the impatience which I manifested after the vote on your principal amendment. I find the organization of the medical faculty under the existing statutes a very trying fact.

[1]Holmes, Oliver Wendell. An address to the Harvard Medical Society, November 16, 1920.

[2]*Annual Report of the President of Harvard University for 1870–71*, p. 20.

Eighteen teachers work actively in the School besides the lecturers, annually appointed, and yet a majority in a body of no more than eight men—all of whom are seldom present, only three of whom have representatives in their absence—can determine the policy of the School. . . . The more I see of the workings of the present organization, the worse I think of it. There is more bad blood in the medical faculty than in all the rest of the University put together—and it has always been so. Do you not hear at every meeting the lowest motives attributed both to teachers and students? You must have been quite as much disgusted as I have been by the mercenary, cynical, and selfish thoughts which have so often been expressed at our meetings. I cannot help thinking that there are grave defects in the very constitution of the School.[3]

He was vigorous in his advocacy of the laboratory method of teaching, being the first teacher in America to teach chemistry by that method. Concerning the laboratory in medical education, he wrote:

Your main proposition, that the primary object of a medical school is to train men to practice medicine, cannot be successfully controverted; but I should want to insist also that no young man can be well trained to practice medicine unless he acquires on the way a thorough knowledge of the laboratory method of inquiry, and much manual skill of the laboratory sort. A country practitioner of today positively must have a great deal of laboratory skill, or he cannot do his daily work. . . . If we were obliged to choose between a bedside student and a laboratory student, we should have to choose the laboratory student, if our aim were medical progress. You and I do not wish to be obliged to make that choice.[4]

When Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching, was being praised ardently and condemned bitterly for the *Report on Medical Education* which he had induced the Foundation to sponsor, Eliot wrote:

Dr. Henry Bigelow urged the following argument upon our Board of Overseers in personal interviews in 1870–71. "The community needs a large number of physicians whose preliminary education and professional education have both been imperfect and inexpensive. Only the large cities can support really well-trained physicians and surgeons. The public good, therefore, requires cheap schools whose standards of admission and graduation are low, and whose facilities for giving instruction cannot conform to any high standard."

He also said, "Good physicians and surgeons are born not made. If you have a large school with low standards of admission and graduation, you will have more chance of educating the three or four men a year who are really competent to become good practitioners than you will have with a small school of high standards."

The stones aimed at you are thrown from all parts of the country. My difficulties in 1870–71 were local, the most formidable being within the then faculty of our Medical School and our own Board of Overseers. The other medical schools of the country took little notice of the affair, or were reasonably content that I should kill the Harvard Medical School. It seemed to

[3]A letter to someone who taught in the Harvard Medical School, written March 15, 1871.

[4]Letter to Dr. Thomas Dwight, December 20, 1909.

me at the time that the carrying of the three years' progressive course through our Board of Overseers was greatly aided by a report of the President of the Board, Mr. Charles Francis Adams the elder, made to it concerning some medical happenings in his town of Quincy.

. . . . . .

I wonder if Mr. Flexner could get at some facts of that nature about the present crop of doctors in the United States.[5]

IT IS conceded widely that the case method in law started at Harvard. Eliot said that Richard C. Cabot, also of Harvard, was the pioneer in using this method in medicine.

I am interested in this development of the "case method" in teaching medicine partly because it is an outcome of the method of teaching law from actual cases which was introduced into Harvard Law School by Professor Langdell; but also because of my strong interest in Richard's achievement in medical teaching, and in social service in connection with hospitals.[6]

In 1934 one takes bacteriology so much for granted as an essential in medical work that it is difficult to think that it had its beginning a relatively few years ago.

About . . . (1885) I procured the appointment of an instructor in bacteriology in the Medical School who was a disciple of Koch, and procured the assent of the medical faculty to the assignment of one of the unoccupied rooms in their new building for a laboratory of bacteriology. On the whole, the medical faculty had scant faith in the subject and made but little provision for teaching it. But Dr. Ernst, the instructor, soon developed a large work for the laboratory in making bacteriological examinations for practicing physicians. I had heard an eminent practitioner in Boston denounce in warm language the whole bacteriological business. One day, being in the bacteriological laboratory myself, I was surprised to encounter this physician. I said to him, "Dr. ——— aren't you a little off your beat here?" He replied, "I should think I was, but I am in charge this month at the Children's Hospital, and we have got some cases of diphtheria there, and I am forced to come to this damned laboratory to make sure of my diagnosis and to get the antitoxin." So physicians were forced to adopt preventive medicine.[7]

Eliot spoke much of the need for training the senses.

This doctrine about special diagnostic insight seems to me a relic of the old notion that a physician is some kind of a magician. The difference between a good diagnostician and a poor one seems to me to be that the good one sees, hears, and smells more than the poor one, and has a higher degree of skill or sensitiveness in his fingers. It is a question of natural or acquired senses—skill. My remedy for the scanty use of the X-ray would be more X-ray machines and more experts in the use of them.[8]

It was Eliot and his friend James Mills Pierce who first introduced written examinations into Harvard in 1855. That was the first step in reforms in examinations.

In the spring of 1870, when I had been president of Harvard about eight months, I attended an examination of the candidates for the degree of M.D. in the

[5]Letter to Henry S. Pritchett, June 7, 1910.
[6]Letter to Mrs. Richard C. Cabot, April 18, 1918.
[7]Letter to Dr. Smith Burt, July 1, 1918.
[8]Letter to Dr. Richard M. Pearce, May 12, 1920.

Harvard Medical School. Each candidate spent five minutes in conversation with each of nine examiners who were the teachers of the principal subjects then taught in the Medical School. At the end of three-quarters of an hour, the candidates were sent out of the room, the nine examiners took seats about one table, and the chairman remarked, "Jones, candidate for M.D. Are you ready? Vote." Whereupon each of the nine examiners threw down a piece of cardboard on the table, on one side of which a large black circle had been made, perhaps two inches across. If the white side of the cardboard was up, it was a vote in favor of the candidate. If the black circle was up, it was a negative vote. The chairman looked about the table, and said, "Five whites and four blacks, Jones gets his degree."[9]

This soon changed under the leadership of Eliot. The standards of Harvard Medical School became high, and were copied by other schools, so that the profession reached an honorable position. Thus it owes much to Eliot who was born March 20, 1834. Educators should remember their great debt to him in the year of his centennial.

[9]Letter to Henry S. Pritchett, July 28, 1921.

Student-Teacher Rapport

By ALFRED R. ROOT

A Demonstration of Increase in Achievement through an Increase in Student-Teacher Rapport

THIS paper extends the discussion of a student-teacher critique previously presented in this JOURNAL.[1] Its purpose is to demonstrate the practical utility of such an instrument in increasing the efficiency of instruction as measured by students' achievements in their various courses.

Many college teachers believe that both the attitude of the student in a given course and that of the instructor toward a given class play dominant rôles in the learning process. Mental set, interest in the activities of the course, a feeling of partnership and fair play on the part of the student, and a serious attempt on the part of the instructor to make the student the center of a given discipline should increase theoretically the educational output of any course.

The purpose of the rating scale just referred to was an attempt to better the reciprocal attitudes of student and teacher. The scale consists of forty-two questions, with "yes" and "no" answers to be appropriately checked, covering desirable traits of a college teacher from the point of view of the student. A sampling selected from these questions, which will indicate to the reader the nature of the measure used, is given here:

6. Does he seem fair and unbiased in his presentation of debatable hypotheses and questionable data and conclusions?
7. Is he master of class situations?
12. Are his examinations sufficiently comprehensive so as to constitute a good inventory or good sampling of your educational experience in this course?
14. Do you leave the class feeling that the hour has been spent profitably?
24. Do you consider him as a "constructive" influence in your life?
26. Does he annoyingly wander from the point in class?
33. Does he tolerate well-meaning but poorly worded questions in class?
36. Does he have annoying peculiarities of action?
40. Is the vocabulary that he uses in class beyond your level of comprehension?

The two questions that were studied and to which some answers are presented in this paper are: Is it possible for the instructor to alter the student-teacher relationship on the basis of the critique given by students? Does an increase in student-teacher rapport have any increased effect upon student output in that course?

No universal answer can be given, of course, to these questions, but

[1] "Student Ratings of Teachers," JOURNAL OF HIGHER EDUCATION, II (June, 1931), pp. 311–15.

evidence is at hand that it is possible for this relationship to change constructively in consequence of the critique. Through the co-operation of a professor of education in a neighboring institution this critique was submitted over a period of two years to four different groups of students at intervals of two months.

TABLE I

CHANGES OF ADVERSE CRITICISM OF INSTRUCTORS A AND B EXPRESSED IN PERCENTAGES OF REPLIES

	Date of Submitting Critique to Students			
	November 1, 1931	April 20, 1932	October 7, 1932	December 10, 1932
(1)	(2)	(3)	(4)	(5)
	Of Instructor A			
Item 6.....	14	10	11	1
Item 8.....	12	8	6	2
Item 12.....	18	15	8	1
Item 14.....	17	11	8	5
Item 24.....	27	18	10	6
Item 28.....	32	20	12	8
Item 33.....	37	29	18	12
Item 36.....	32	28	16	4
Item 40.....	58	40	25	10
	Of Instructor B			
Item 1.....	45	35	28	14
Item 4.....	35	28	22	16
Item 7.....	50	30	22	18
Item 17.....	28	22	18	12
Item 25.....	60	38	28	25
Item 26.....	61	39	27	25
Item 27.....	35	32	28	25
Item 33.....	52	35	30	28

Each of the two instructors was permitted to utilize any and all devices for ascertaining the specific bases for adverse criticism and to improve his own teaching personality.

IN GENERAL, two techniques were used. The first was by a solicitation of statements from students; these were turned over to one of their number who had been designated as monitor. Students were quite free and liberal in their contributions when they felt a sincere desire for criticism on the part of the instructor. These statements suggested further questions by the instructor until concrete points of attack were elicited. The second technique was an elaborate true-false questionnaire, similar to those used by Mr. W. L. Godshall in the Department of Political Science, Union College, covering the items of adverse criticism. For example, to ascertain the reasons why some students felt that there was insufficient opportunity for preparation of examinations, a group of further questions such as the following were submitted:

Are announcements [of examinations] made sufficiently in advance?

Is there adequate reading material available?

Are you definitely made aware of the subject-matter to be covered by the examination?

Are you definitely made aware of the type of examination to be given?

Is sufficient classroom or conference time devoted to clarify difficult and seemingly ambiguous points?

At such times do you feel free to raise your own problems?

Having devoted reasonable attention to reading, are your questions in class or at conference adequately cleared up?

While it is recognized that prejudices or attractions aroused by two or three trait-actions may so color the student's attitude that he cannot evaluate other trait-actions fairly, it has been demonstrated that the student-teacher critique furnishes a basis for altering the rapport between

instructor and student. In the present study, definite decreases in adverse criticism for all points of the critique were discovered, with astonishing change at the points of greatest criticism. Table I is indicative of some of the changes that took place as measured by percentages of adverse criticism of two instructors.

DOES an increase in student-teacher rapport increase student achievement? In this instance, objective data are available in a more limited form. It was rather difficult to run two classes simultaneously with the control and experimental group since the personality of the instructor and his effect upon the students could not be varied easily by running two classes at the same time. Recourse was made to a comparison of achievement of a class in one year with that of another year. It is shown that there is a definite change in rapport either through change in personality of the instructor or the personality of the students, or both. This is a valid procedure only where the two student groups are comparable in general ability and previous preparation. That these two groups are somewhat comparable is shown in the following comparison of the two student groups studied:

Trait Variable	Group I	Group II
Otis intelligence quotient:		
Mean	113	112
Standard deviation	9.3	8.6
College aptitude ratings	58	57
Psychological preparation:		
Mean	29.9	32.1
Standard deviation	16.3	18.3
Psychological achievement	68.6	86.5

The college aptitude rating of students,[2] the intelligence quotients derived from the Otis General Intelligence Examination, Higher Form A, and an objective examination covering the fundamental work in general psychology[3] were used as indexes of general ability and preparation. Student achievement was measured by numerical progress on the Hamline Psychology Achievement Test.

It is evident that the abilities of the two groups studied are comparable so far as measured. The change in student rapport from one year to the next year is given in Table I for selected items. The average change in adverse criticism for the instructor in this case decreased from 16 per cent to 7 per cent. The average achievement score in the class was increased 17.9 points. The standard error of this difference is 7.05 suggesting that this difference is probably significant.

From this brief study there is a presumption that the attitudes of students toward an instructor and an instructor toward students are capable of change on the basis of a critique such as used here, and that this increase in a wholesome relationship shows itself in increased output.

[2]The Minnesota College Aptitude Tests and corresponding college-aptitude ratings derived in part from them have been given wide dissemination by Dean Johnston, of the University of Minnesota.

[3]This is a true-false test consisting of Form A and Form B, each form including 180 items. It has a reliability of +.96 and a validity of +.98. Validity has been checked by correlating scores on the test with a five-point rating by two instructors in psychology. This five-point rating was given at the end of a semester after individual oral examinations lasting from one to two hours and covering factual material, applications in psychological problems, and inferential ability.

New Ways of Organization

By CLARENCE LEUBA

New Methods of Educational Organization as Applied to the Department of Psychology, Antioch College

MOST, if not all, of the methods herein described have been used by others at one time or another; the writer's particular combination or application of these methods is his only claim to newness. To a considerable extent, he is merely applying to higher education the best methods now already used in elementary education.

Wide individual differences are exhibited by the members of an introductory class in general psychology. Important as may be the differences in intelligence, they are overshadowed by much more important differences in maturity, preparation, methods of work, interests, and religious, social, and cultural backgrounds. Some of these students have barely heard of the word "psychology," others have done a substantial amount of reading of a more or less popular nature and have some fairly well-defined, though not necessarily correct, notions as to the field of psychology. Some have prejudices and opinions, more or less rationally founded, for or against certain psychological doctrines. A few have fairly definite ideas about what, of a practical nature, they should gain from a study of psychology. At Antioch, as at many other institutions, these students range from Freshmen to Seniors. Some are eager to learn; others are merely going through a routine prescribed by parents or teachers.

An individual's approach to psychology should depend, in good measure, upon his degree of maturity, his needs, and his interests. Concepts will have meaning for him chiefly in so far as he is able to interpret them in terms of his own experience. If he has not had the required experiences, these concepts remain mere bookish abracadabra. We have only the student's past experiences and present interests to build upon, and these will vary greatly from one student to another. Only in a few students can general intellectual curiosity be relied upon as a sufficient motivating force to carry them through the course.

A consideration of the vast individual differences exhibited by the members of the usual beginning class leads one to the conclusion that flexibility is the most important single element in the construction of the course. Were students roughly similar in capacities, interests, and needs, we might successfully put them through a standard mill. Similarities

were more frequent when a college education was limited to a select few, and doubtless our standardized methods are a relic of those days. It is surprising, nevertheless, that we psychologists, who are such earnest students of individual differences, should make so little allowance for these differences in teaching general psychology. Perhaps our emphasis on individual differences in intellectual capacities has blinded us to the magnitude, and significance for education, of other individual differences.

The attempt on the part of any one teacher to put his students through a standard mill becomes the more objectionable as we realize the absence of agreement among members of the profession regarding specifications for the mill. Psychology is a subject the presentation of which can be, and is, much influenced by the interests and attitudes of the professor to which the student happens to be exposed. For any instructor to standardize his course to one method and content comes perilously close to forcing students to accept his particular brand of psychology. In such a case, most students will study him, and psychology only incidentally.

AT ANTIOCH, we seek to offer the student a variety of ways by which he may attain psychological knowledge. These ways are presented as opportunities which, in the measure that they serve his particular needs, it would be wise for him to use. Each student receives a syllabus containing a list of topics covered in general psychology; a descriptive bibliography of the books from which he may secure information on those topics; and a description of the lectures, demonstrations, discussion groups, and laboratory facilities available. There is no compulsion of any kind about attending the class meetings. Using his syllabus as a guide, a student may, if he wishes, work entirely independently. He finds outlined in his syllabus a series of objectives whose successive achievement serves as a record of progress and a source of motivation.

To achieve good marks, it is not necessary to know, and to cater to, the instructor's particular attitudes and interests in psychology, whatever they happen to be, for the semester examinations are set up and marked by an outside examining committee of three psychologists. In making out examinations this committee is guided entirely by the syllabus. At the request of students who may wish to test themselves oftener, the instructor may make up optional additional examinations.

Theoretically, a student is free to make use of books, lectures, discussion groups, and laboratory facilities to whatever extent they help to meet his particular needs. In practice, however, students are requested not to join a discussion group unless they expect to attend regularly. This request is made since one discussion often depends upon previous ones. It is obvious that irregular attendance would make orderly progress impossible. Joining a group signifies that, for the sake of the advantages the student expects to gain from group membership, he is willing to assume certain social obligations, the first of

which is regular attendance. Joining a group is optional, but once a student has joined, regular attendance is expected as a prerequisite for continued membership. One of the discussion groups is reserved for the better students in the class.

Several copies of standard laboratory manuals and the necessary apparatus are available at all times in the laboratory. Three small rooms are reserved for the use of the members of the general psychology class. Since these students do not come in large groups at any one time, it is possible to avoid costly duplication of apparatus. Students are advised to perform at least one experiment in connection with each main topic taken up in psychology. For those who prefer to work under supervision, the instructor is available in the laboratory one afternoon a week.

By offering students a variety of approaches to general psychology, we seek to afford a flexibility consonant with individual capacities, interests, and needs. Classes and laboratory periods are not things a student has to attend, but opportunities of which he may avail himself, if and when they are of use to him. By divorcing the teaching and examining functions, the instructor in the course becomes less a taskmaster and more a helper and guide to the mastery of the subject.

THE college teacher is frequently caricatured as an ineffectual, pompous sort of a person to whose vociferations students give lip service; higher education is pictured as still predominantly on the abstract level; and students, if they can recite the ideas handed them, satisfy the teachers. Like all caricatures, this is, of course, an extreme picture.

A psychology applied to life has only a secondary interest in the ideas students may acquire. These ideas are of importance only as they influence behavior. The primary concern must be the shaping of students' activities to make them personally and socially effective.

Do not confuse a psychology applied to life with applied psychology as the latter term is commonly used. We do not mean, by the former, the applications of psychology to this or that profession, such as advertising or personnel work. Such specialized topics have little place in an introductory course. For students in such a course, psychology should be applied to the general conduct of life and not to specific professions. When people think of making psychology practical, they unfortunately, too frequently, think of applying it professionally. Its principal application, however, should be to methods of living full and satisfactory lives.

Too often a practical psychology implies a study of relatively unrelated cases and the attainment of immediate objectives to the neglect of basic principles and values. Provided the principles spring from life experiences and not merely from the unreality of a book, there is no natural antithesis between a psychology applied to life and the learning of general principles. The latter make for economy of time and broader understandings.

At present we are engaged in organizing the contributions which

psychology can make to a program of personal effectiveness.[1] In this program, knowledge is considered valuable only in so far as it affects behavior. Personal effectiveness is envisaged as success in satisfying the organic and social needs of the individual. What is the nature of hunger, sex, relaxation, and other fundamental needs of the organism, and how may they most effectively be satisfied? What are the sources of motivation available for the student? What factors make thinking and overt behavior ineffective? What techniques are there for making and breaking habits? How may the student improve his methods of learning? These are some of the contributions of psychology to personal effectiveness. On each one of these subjects the student would be supposed to pass in review his present methods and habits and, wherever necessary, to outline with his adviser a program for making them tally more closely with the knowledge he is acquiring. That, in brief, is our conception of a psychology applied to life.

SINCE all our advanced students together constitute a number considerably smaller than that enrolled in the introductory course, it is possible to arrange their work with even greater flexibility. No formal course, other than the general psychology, is offered in the department.[2]

[1]This program will include contributions from such fields as biology and physical education, as well as from psychology. It is being initiated under the general supervision of Mr. O. F. Mathiasen. It will include the major portion of the material now covered in general psychology.

[2]For the present year, however, standard courses are still listed in the college catalogue.

We give the advanced students a syllabus covering the whole field of psychology. This syllabus differs from that for the general-psychology course chiefly in comprehensiveness. It contains a list of the topics in the field of psychology, a descriptive bibliography, and a statement of the experimental facilities available. It is a mistake to believe that there is one standard logical sequence in which to take up these topics. Each student should take up whatever best meets his present needs and interests. Education is not a liquid which can be poured into an individual by means of miscellaneous lectures and readings. As has been said so often, all education is self-education. One becomes interested in a topic, looks it up, and learns something about it. The materials to be learned must bear some relation to present interests and needs and become integrated with them. The main function of the teacher is to broaden and deepen those interests. Education will then proceed apace and without prodding.

Time limitations make it impossible for an instructor to make a practice of meeting students individually. If they wish to meet with him regularly they must come in groups. Consequently, advanced students usually organize themselves into small groups of from three to six members on the basis of congeniality, ability, and similarity of interests. The chairmanship of each group rotates among the members from meeting to meeting. Each group meets at least once a week by itself and once a week with the instructor. At the meeting with the instructor the group discusses a

topic decided upon at the student meeting. At the end of the semester each group draws up a list of subjects on which it is prepared to be examined. Students are marked on the basis of both the quantity and the quality of the work done. A few students elect to work alone without the help of either the instructor or fellow-students.

We no longer have a separate course in experimental psychology. As in biology, or any other science, students are expected, as far as possible, to perform some experiments in connection with each topic. As subjects, the students may use one another, the children at the nursery school, the animal colony, or members of the community who may be willing.

It is commonly said that methods such as the ones we have been describing are well enough in theory, but that they are impractical because the average college cannot afford the faculty time required by such methods. To this we may now retort, from our experience, that an instructor can handle, using these methods, sixty-five students in general psychology and fifteen or twenty in advanced work. Savings are made in the instructor's time by training students in methods of effective independent study and by providing the necessary books, syllabuses, and laboratory facilities, together with whatever written instructions are required for their use. The instructor need meet with students only after they have done as much as they can by themselves and with the help of their fellow-students.

It will probably be found that the older and more advanced students can be used advantageously to help the beginners. When one has to explain a subject, one is frequently forced to make finer discriminations and, on the other hand, the advanced student is often closer to, and better able to understand, the problems of the beginner. The give and take between beginner and advanced student is stimulating and generally advantageous to both. In the few cases in which we have observed such an arrangement in practice, we have been struck by the fine educational spirit it has engendered. After our advanced students have gained some knowledge and experience in educating one another in the small groups, it is our aim to urge them to spend some time working with the general psychology students. We feel that in not using our upperclass students to help in the education of the beginners, we have been missing an opportunity mutually beneficial.

Personnel Administration

By ESTHER LLOYD-JONES

The Relation of Student-Personnel Administration to General Administration and to Personnel Services

STUDENT–PERSONNEL work is in the stage where it is being talked about with sublime assurance by individuals who hold widely differing points of view as to what it really is; but a number of individuals possessed of wide theoretical background and sound experience have most helpfully defined and delimited the field. President Hopkins' classic definition of personnel work is, "Work having to do specifically with individuals." Dean Hawkes limited this broad definition to, "Work for the individual student which is being done outside the classroom." The definition of President Clothier and his Committee on Principles and Functions of the American College Personnel Association once more broadened the scope of personnel work at the same time that it made it more specific:

> Personnel work in a college or university is the systematic bringing to bear on the individual student all those influences, of whatever nature, which will stimulate him and assist him, through his own efforts to develop in body, mind, and character to the limit of his individual capacity for growth, and helping him to apply his powers so developed most effectively to the work of the world.

The latest of these four definitions is that of Cowley, who, agreeing with Dean Hawkes, says that student-personnel administration is, "The administration of all university-student relationships aside from formal instruction."

There is by no means universal acceptance of any of these definitions. There does seem to be, however, fairly general agreement as to the functions that personnel work includes. These are: administration of admissions, including selection and pre-college guidance; orientation of students; educational guidance, including the use of such instruments as objective tests; personal counseling, whether classified as psychological, religious, ethical, vocational, or personal; administration of the social program; supervision and direction of extra-curricular activities, including athletics and fraternities; administration of housing; administration of financial aid and part-time employment; supervision of student health; provision for a mental-hygiene program; maintenance and administration of adequate personnel records; placement; and research.

It is important to describe more clearly what student-personnel ad-

ministration is, what its relation is to general administration, and what its relation is to the various personnel services. In the first place, student-personnel administration and student-personnel work are not synonymous. Any of the "personnel services" included in student-personnel administration are "personnel work," but the co-ordination of student-personnel services into a total program and the supplementing of those existent personnel services by other necessary services is student-personnel administration. With this distinction in mind, President Hopkins' definition is seen to be one of personnel work; Dean Hawkes's, also, is a definition of personnel work. On the other hand, President Clothier's is an excellent definition of personnel administration, although he says it is one of personnel work. Cowley's definition is clearly one of personnel administration, and he so states it.

It is necessary for me in this connection to revise my own earlier definition of personnel work also: "Personnel administration"—not, as I formerly said, "personnel work"—"is the co-ordination and concentration of all the resources of the institution together with the information afforded by scientific investigations for the purpose of furthering the best interests of each individual in all of his aspects."[1]

STUDENT-PERSONNEL administration is one of the three main divisions of educational administration. The others are instructional administration and operational administration. Student-personnel administration, unlike specific personnel service, is essentially a function of administration and resides originally and ultimately in the administrative head of an institution. It is generally delegated by the president or principal to a specialist in student-personnel administration, usually called by some such title as director of personnel, dean of men or dean of women, adviser of boys or girls, and the like. It is split off from general administration when some such conditions as the following make it necessary: large numbers of students; pressure of total administration laid on the president or principal; lack of training on the part of the president or principal to perform the functions of personnel administration, so that elements of the program of student-personnel work are being neglected; and appreciation on the part of the general administration of the desirability of a good deal of time and skilled effort being given to this aspect of education.

Those who have attempted definitions of personnel work or administration have had some difficulty in distinguishing the personnel field from that of education itself. Hopkins specifically says, "He does not assume that it does differ from education itself." Clothier might well have said that his definition was one of education itself. Hawkes and Cowley, however, try to separate it from the classroom. Student-personnel administration can no more be set apart from the intimate processes of education, either in or out of the classroom,

[1]Lloyd-Jones, Esther. *Student Personnel Work.* New York: Harper and Brothers, 1929. p. 207.

than can general administration. Its sole reason for effort is to advance in every way possible the best development of everyone with whom education is concerned.

When one recognizes some distinction between personnel work and personnel administration, it becomes clear that the teacher as a personnel worker is indispensable in any adequate system of personnel administration. The director of student-personnel administration or dean will succeed only to the extent that he promotes among the teaching faculty the personnel point of view and utilizes every bit of skill and wisdom the teacher may possess as a personnel worker in an ever evolving system of personnel administration.

THERE still exists, even in the minds of those professionally engaged in personnel work, considerable uncertainty as to what student-personnel administration is; consequently, there is still fogginess and confusion about the relationship between student-personnel administration and such personnel services as vocational guidance, psychological counseling, record-keeping, administration of extra-curricular activities, and placements. Some completely identify vocational guidance, placement, or research with student-personnel administration, fallaciously arguing that because student-personnel administration includes vocational guidance, vocational guidance is personnel administration.

The best philosophy of the administration of family life and that of student-personnel administration are identical. The finest kind of home life is not built through the exercise of despotism—not even of benevolent despotism on the part of some one member who is highly skilled; only through a truly creative group method in which each co-operates for the sake of the others' and his own happiness can individuals best develop. The greatest skill in achieving this type of relationship, in which all can thrive and be happy, consists in the ability to get spontaneous participation on the part of each member, as well as in the ability to supplement and co-ordinate individual efforts deftly and inconspicuously.

The stern, indomitable type of leadership found in typical matriarchies and patriarchies is recognized as inimical to the best development of personalities within the family group. While the dictator in government seems to be having his little moment again, dictators in the rôle of administrators of student personnel not only doom themselves to short tenure, but also greatly jeopardize the success of the work itself. A policy of "putting something over," of "making someone come to time," of "riding roughshod over the opposition," while temporarily intoxicating enough to make one feel the brilliant, irresistible leader, inevitably spells disaster to the professed purposes of personnel work and of sound education.

A home-maker does not do her duty completely when she fills the stomachs of her family three times a day with satisfying food. To the extent that she is intelligent and modern in her viewpoint, she utilizes eating for social values; she uses ceremony to

achieve psychological satisfactions. The basic values guiding her everyday administration of the culinary side of household management are those having to do with health and physical development and social needs. The home-maker may use the specialized knowledge of dietitians, she may employ chefs in her kitchen, but, in general, the responsibility for administering the day-by-day program and having it carried out satisfactorily rests with her.

The director of student personnel in an educational institution may have a minimum of staff—perhaps only one cook, as he does in some small, poverty-ridden institutions—or he may have a splendid retinue of dietitians and cooking experts in charge of the cafeterias and dining rooms. To the extent that the experts utilize eating for education in health and social values, the personnel administrator is fortunate; residual responsibility, however, falls to his office. He is also responsible for co-ordinating this area of student life with all the other areas which personnel administration includes within its scope.

The housing of a family is not merely a matter of having a safe shelter from the elements. Even if a home-maker employs a staff of architects, interior decorators, and landscape gardeners, there is still much that someone must do to make functional living within that material setting happy and attractive. Similarly, although the director of student personnel may not have more than a consultative relationship to the architect in the planning of a dormitory, his is the voice that must insist that there is much that housing can contribute directly to aesthetic enjoyment, social education, recreation, health, and convenience; his is the responsibility for seeing that the housing of the students does contribute these values to a maximum degree. He may be able to work directly with capable, personally selected heads of dormitories; he may have to work with private householders who house the students in off-campus residences. In either case, this function of personnel administration is co-ordinated through his office with other personnel functions, and residual responsibilities fall directly upon him.

THE health program is one that is included within the personnel-administration field. It, also, is one of the main responsibilities of the home-maker. The intelligent home manager realizes that health is to a very large extent a matter of hour-by-hour living. She realizes that it is of the greatest importance to build health that will withstand unavoidable strain and stress; accordingly, she guides the program of the family with this in mind. She believes in periodic health examinations for every member of the family. When need arises, she uses the best medical specialists available; but the really constructive work comes in putting into actual effect the recommendations arising from the examinations and from the advice of the medical experts. Parents, if they are wise, employ trained nurses and medical specialists in emergencies, but they

also exercise common sense and ordinary skill in caring for routine scratches and minor injuries.

The director of student personnel recognizes the health program as one of the fundamental responsibilities of an educational institution. He will sacrifice other elements of a complete personnel program, if necessary, for the sake of the health aspect. Dean Smiley has set down the health factors which the average college student needs in order that he may most successfully develop through his college years as:

1. Healthful living conditions including:
   - Good food at a reasonable price
   - Comfortable and healthy classrooms and quarters
2. Balanced activities including:
   - A wisely chosen schedule of studies
   - Suitable physical exercise
   - Suitable social and recreational activities
3. Efficient health service including:
   - A thorough physical examination periodically
   - A periodic inventory of health habits
   - Convenient medical consultation service
   - Communicable disease control measures
   - Infirmary care and laboratory service
4. Effective health and character training including:
   - Training in elements of biology and bacteriology
   - Training in the elements of human anatomy and physiology
   - Training in personal hygiene and the elements of community hygiene
   - Training in the elements of religion, ethics, and mental hygiene.[2]

From this outline it is apparent that a complete health program as viewed by a college health officer must be a co-operative enterprise. The school or college medical staff may have the vision and ability to achieve an integrated health program; to the extent that it can, and does, the director of student personnel can feel less direct responsibility for this aspect of the personnel program. His responsibility in this case would consist of co-operating at every point with the health officers, and in co-ordinating the total health program with the other aspects of a complete personnel program.

AN INTELLIGENT family gives serious consideration to the vocational plans and adjustment of its members. Parents attempt to give the kind of character training that will make their children stable and productive members of economic groups; they attempt to build strong bodies and nerves to serve their children as participants in a working society; or they attempt to guide their interests and provide training that will enable them to be self-supporting in spite of some physical handicap; parents attempt to provide opportunities for education that will fit their children as well as may be for some profession or occupation. They use their own experience and that of friends in attempting to help their children decide the general vocational trend which they should adopt. In addition to all this, however, they will gratefully use the scientific information of a specialist in vocational guidance who can make a careful objective inventory of their children's

[2]Smiley, Dean F. "Provision for the Health of Students," *Provision for the Individual in College Education*, W. S. Gray, editor. Chicago: University of Chicago Press, 1932. pp. 177–88.

abilities and disabilities and interests, provide sound and extensive information about vocations in our complex economic society, and give definite information about opportunities for employment.

Similarly, in a school or college, the director of personnel who can have within the institution an expert in vocational guidance and an expert in placement must gratefully utilize the valuable services which these experts can provide for the students. The task of "assisting the individual to choose an occupation, prepare for it, enter upon and progress in it" is one requiring expert knowledge and skills. It is also a task requiring a high degree of co-operation with the director of the health program, the director of the curriculum, and with many outside agencies. The relationship of the director of personnel, then, to the vocational-guidance program is that of co-ordinator, supplementer. He will integrate the valuable services of the director of vocational guidance, and the director of the appointment bureau with the total plan of personnel administration. In the event that the director of vocational guidance, the health officer, and the director of religion, each may conceive as one of his primary duties that of training students in the elements of ethics and mental hygiene, the director of student personnel will attempt to co-ordinate their efforts and make the total impact on the student as effective as the enthusiasm of these specialists makes possible.

In similar fashion, one could point out the relationship of the director of student personnel to other parts of the total personnel program such as the mental-hygiene program of the institution. Specialists and psychiatrists, if available, are exceedingly valuable, but mental hygiene actually comes about to a large extent through day-by-day living in an environment that is favorable to it.

ONE of the most important functions of personnel administration is that of co-ordinating information about each individual. The physician will collect much information about the student's health history, and will, for each year of his college life, summarize his health and physical status. The academic adviser will discover and record year after year facts of considerable importance about his academic interests, his successes and failures. There may be considerable overlapping between the facts gathered by the physical and the academic advisers. Other personnel workers, similarly, will possess specialized information about the student. The duty of the administrator of student personnel, however, is to take the contributions of each one who has information and insight concerning the young person, verify this information, supplement it, co-ordinate it, and record it cumulatively, and make it function as an important guide for his education.

The growth of personnel services in educational institutions since 1920 has been amazing; personnel experts of all sorts have been employed in rapidly increasing numbers. The relationship of all these specialists among themselves, and between them

and the person responsible for the administration of personnel work, has been extremely indefinite and unsatisfactory in most instances. On the one hand, each personnel expert has felt a compulsion to encompass the whole field: psychiatrists, for instance, starting with their more immediate professional duties, soon see the necessity of relating their information to all other phases of personnel work; directors of vocational guidance soon see the value of directing aspects of the total personnel program other than the vocational guidance function; it is obvious that the health officers encompass a broad field. On the other hand, deans or directors of student-personnel administration have felt to some extent a sense of guilt if they were not equally skilled in all the personnel functions, if they were not competent medical officers as well as vocational-guidance experts, psychoanalysts, statisticians, dietitians, architects, and administrators.

We hope it is clear from this analysis that the specialist in any aspect of personnel work may have a distinct professional field within which he may render inestimable value, just as the pediatrist, while advising with regard to and directing the upbringing of a child, performs an expert service of inestimable value to the parents in their total plan for the welfare of the family. On the other hand, we have also tried to point out that the administrator of personnel work has a distinct function in co-ordinating the efforts of these specialists, supplementing them in every way possible, and in making the total impact of the complete personnel program as beneficial to each individual student as it can be.

We cannot assume, unfortunately, that all personnel directors, any more than all home managers, are going to be burdened within the next few years with an oversupply of expert help. Just as mothers are going to have to get along without interior decorators and cooks, so directors of student-personnel administration are going to have to do their own directing of extra-curricular activities, and much of their own counseling. The home manager will have to be adjustable enough, intelligent enough, and well enough trained to be able to keep her home attractive and livable, even to the extent of doing her own scrubbing; she must keep her family well fed, even to the extent of preparing the vegetables and washing the dishes afterwards. The director of student-personnel administration, likewise, must be adaptable enough, intelligent enough, and well enough trained to be able to supplement the services of those few experts in personnel work who may be available. It will be well for everyone entering the field of student-personnel administration, in addition to having thorough preparation in the field of education and administration, to know something about organizing a testing program, about administering a social program, and about the principles of counseling, of making a case study, of vocational guidance, of statistics, and of record keeping.

Better English

By SADA A. HARBARGER AND WILLIAM H. HILDRETH

A Co-operative Project Carried on by a Department of English and a College of Agriculture

ENGLISH in all the written work of the students in the College of Agriculture, Ohio State University, has been kept at an acceptable standard, and remedial work in English has been reduced to a minimum through the co-operation of the teaching staff with the consultant in English for the whole college. That is to say, a member of the English department, specially assigned, during the past year has been consulting with the instructors of the College on the arranging of specifications for term papers, and advising with the students in their attempts to meet these specifications through the logical organization and the accurate, effective presentation of their ideas; the instructors have been holding them for good English.

There has always been a desire in the College to have acceptable English in all the written work submitted by the students. In the past, when the instructors had the time, errors in spelling, in punctuation, and in grammar were checked. Thus did they indicate to the students their attitude toward the English of the term papers. Seldom, however, did the illiteracies have a marked influence upon the paper. When the instructors were rushed for time, they read and rated the papers only for the accuracy and detail of the information, and lamented the inadequacy of the formal training in English that had not eradicated the faults in organization and expression. The responsibility for all the poor English was upon the Department of English.

Such division of effort did not produce the desired results. The English of the students remained poor. Something had to be done that would permanently improve the English of the students throughout the entire college course. After much study, it was felt that there should be a closer working relation between the College and the Department of English. As a result, the College of Agriculture and the Department of English united in a co-operative project for better English. It has been co-operation in the true sense. Each not only has recognized individual responsibility, but has had a particular part to contribute toward sustaining and maintaining the common aim and objective—acceptable English in all written work, regardless of whether it is an integral part of a professional course or a detached

formal study preparing for writing activity in college and later professional life. It is not remedial English in the sense that students are remanded to the English department for drill in the mechanics of writing to supplement inadequate training in the English courses. It is the evolving of methods whereby instructors in the professional courses hold students to the acceptable standard of English which they demonstrated when they received credit in the required English courses. These belong to the general methodology of teaching rather than to English alone.

FOR some time, the Society for the Promotion of Engineering Education through its committee on English has been considering, and various technical schools have been experimenting with, different co-operative methods for the improvement of student English in the engineering colleges.[1] Their methods, experience, and success have furnished the precedent for the present undertaking. Distinctive features of the plan in force at Ohio State University are:

1. The English consultant, who, in addition to teaching sections of the required English courses to the students in the College of Agriculture, acts in an advisory capacity with both the teaching staff and the students.
2. The whole college has taken a part of the responsibility for maintaining a high quality of English by recognizing good English as a vital college objective.
3. All the co-operative activity of the English department has proceeded through the regular college channels; that is, through the general administrative division of the college. At the outset, the junior dean, as the college representative, announced through a letter to the teaching staff the inauguration of the project and suggested possible methods of co-operation. Then, the "bookings" of the English consultant with departments were made through the dean's office.

Previous to the inauguration of the co-operative project for the whole college this year, there had been some isolated yet significant efforts in co-operation in English in this College. Students' papers in the Department of Zöology were read and rated for two quarters in 1930–31 by the assistant in English who later became the consultant in English for the College. The director of the required English courses drew up an evaluation of English slip[2] for the use of the teaching staff in rating papers. This was the outgrowth of the director's presentation of the aims and objectives of these courses, at the invitation of the college representative, to the Faculty Study Group and the heads of departments in 1931. Also, the papers from six or seven professional departments were read by the director of the English courses early in 1932.

When the opportunity came, therefore, to begin united and extended co-operation with the teaching staff of the College, there was back of it the successful operation of two of the

[1] *See* Birk, W. O. "Inter-Departmental Co-operation to Promote the Habitual Use of Correct English." *Proceedings of the Society for the Promotion of Engineering Education*, 1925. Vol. XXXIII, pp. 324–32. Also, Nelson, J. Raleigh. "The English Department," *Ibid.*, pp. 501–11.

[2] Nisonger, H. W. "The Survey of Agriculture," *Service Studies in Higher Education*. Columbus, Ohio: Ohio State University, 1932. p. 198. (Bureau of Educational Research Monographs, No. 15)

three quarters of the required English courses and the prospect of the third running concurrently, the understanding by the teaching staff of the aims and objectives of these English courses, and experience on a small scale in actual co-operative methods. From these were derived some insight into the student's attitude toward the relation of English and information in a term paper, some knowledge of the use of the paper in the professional course, and some appreciation of the problems that confront the student in the preparation of his written work when acceptable English is not his primary aim.

Though the procedure has been through the regular college channels, the required English courses for the college have been the core and the point of reference for the co-operative activity; hence, some brief comment concerning aims, objectives, and philosophy is pertinent.[3] Three three-hour courses—one each quarter, beginning in the second quarter of the first year and ending the first quarter of the second year—make up the year's work in English. The aim is acceptable English for professional uses; the material is purposely limited to give training in the few significant aspects of writing for developing a vigorous, dignified, mature, professional style; the motivation is by further stimulating the desire for increasing professional prestige through English. This has been aroused in the survey of agriculture in the quarter preceding the beginning of the formal study of English. Here English is presented to the Freshmen as a major college objective. The aspects of writing selected and the types of papers required for English are typical of those demanded in the succeeding courses—reports of experience, observation, and simple research.

THE co-operative efforts, thus far, have been concerned largely with the long papers assigned in the professional courses. A survey of the uses of the long paper in these courses showed that its purpose, if formulated, might be any one of the following, though there has been little uniformity:

1. Record of method of analyzing reference material in a course.
2. Informal and extended examination to discover what the student gets from a course, or how he secures his information.
3. Demonstration of student's initiative and general attitude toward the subject-matter of a course.
4. Opportunity for extending his information in a portion of a field that is of special interest to him.
5. Practical demonstration to the student of the kind of writing he will need in the pursuit of a particular branch of the profession—forestry, research, account of a process, description of a mechanism, or observation.

When the co-operative work began in the Autumn Quarter, the following tentative program had been worked out for the English consultant:

1. Two sections of English for students from this college, approximately thirty-two hours per week.

[3]For a detailed account of the applied English courses at Ohio State University, *see* Tyler, Ralph W., and others. *Service Studies in Higher Education*, Chap. XII, by Sada A. Harbarger. (Columbus, Ohio: Ohio State University, 1933. pp. 157–68).

2. Co-operative work, approximately sixteen hours per week beginning the first week of the quarter, which was to consist of detailed analysis of papers from departments suggested by the college representative, approximately three weeks; conferences on outlines with students, approximately two weeks; and reading and rating of approximately 150 papers during four weeks.

The goal for this first quarter was direct co-operation with about one-third of the professional departments. As the time for the Seniors to profit by the project was short, the professional courses for upperclassmen were considered first. The most efficient method of large-scale co-operation was still to be worked out; hence, it seemed desirable also to start with small, somewhat unified, professional groups. Limits were set so that some definite results could be reached and evaluated by the end of the first quarter, and the procedures for the succeeding quarters modified where experience demonstrated that changes were needed. The English consultant, too, had thus some guide for his activity, could proceed with some confidence, and have some means of measuring his achievement.

SINCE it was understood that the year's work was to be exploratory and experimental, courses selected for early co-operation were chosen because of their availability and not because of any special need for assistance which was manifested at that time. In any situation, it was necessary for the consultant before beginning work to learn what sort of written assignments had been required in the past, and what specifications for this written work had been given to the student by the instructor. This information was not difficult to gain, for a majority of the instructors had saved specimen papers and specifications from previous quarters. These gave the consultant his first grounds for recommendations, or at least gave him a general impression of the type of writing done. If such papers were not available, and if the instructor had not analyzed the weaknesses of his own papers in the past, there was little to do until the class under observation had presented its first written work.

When the papers were turned in to the instructor, they were handed over at once to the consultant who checked them for display and layout, organization, and grammar. The results of the diagnosis of each paper were recorded in duplicate, one set for the consultant's files and one for the instructor to use later. It was then the duty of the consultant to determine which of the weaknesses were due to carelessness or lack of ability on the part of the students, and which were the result of insufficient directions or insufficient insistence on correctness from the instructor. In either case, after the instructor had evaluated the papers for professional subject-matter, he was advised to interview those students whose papers were not of proper quality.

In the beginning, the consultant did this interviewing, but it soon became clear that much more could be accomplished if it were done by the regular instructor, because the

students were then apt to feel that good expression was an important part of the professional course. For his guide in interviewing, the instructor had available the complete diagnosis of each paper which had been furnished by the consultant; but he was able to learn and record for himself why students made certain errors. After all these processes were completed, the consultant was ready to prescribe remedies for the situation. To assist him in prescribing, he had old papers and specification sheets, a diagnosis of the new papers, and the results of the instructor's conferences with the students.

Let us take, for example, a hypothetical case under the following conditions:

1. No instructions had been given in the assignment other than "Write a research paper on a subject pertaining to this course."
2. The resulting papers contained examples of all the errors possible to make in a library research paper, such as bad spelling, bad grammar, common illiteracies, lack of clarity of statements, material used without proper acknowledgment of sources, illegible writing, and bad organization. Some papers showed that they were written in the last few hours before they were due; some were written from only one or two sources.
3. The interviews showed that the students were of three groups: one which did not know what was expected of them; one which did not know how to do better work; and one which did not try.

In a case like this, the consultant recommends the following procedure:

1. The instructor shall assist students in choosing a subject neither too broad nor too restricted for treatment by undergraduates, and shall give students a reasonable amount of direction to the source material.
2. The paper must be planned or organized before it is written. Organization is accomplished by outlining. The instructor must distinguish between the "directive" and the "factual" outline. The directive outline in many cases is furnished by the instructor at the time the paper is assigned, or it may be made early in the study by the student himself. In it, the student notes the points which his paper must cover, or lists in some sequence, topics which he hopes to consider for his paper. Its nature, as its name implies, is general, and its purpose is to assist the student in searching for information, in classifying this material, and in building it into the factual outline. The factual outline consists of the actual material to be used in the paper selected for adequately discussing the subject for a particular purpose and placed in a skeletonized form. A thorough knowledge of the subject-matter is essential before the student can make the factual outline. This factual outline should be inspected for logic, material, and proportion at least two weeks before the paper is due.
3. Complete instructions for the mechanical make-up of the paper shall be given. These will concern the binder, the title-page, the display, the layout, the nature of the preface, the table of contents and its relation to the outline, and the acknowledgment of sources. All this information can be placed on one mimeographed sheet of paper.
4. Rough notes used in collecting the material shall be handed in with the paper in order to give the instructor an additional check on the student's activity.
5. A definite assignment shall be made as to length of paper.

THE results of the year's efforts in co-operation are apparent and tangible. The students have been impressed with the fact that insistence on good English in all the written work is the policy of the College. There has been a marked improvement in the appearance and quality of the written work without standardization of form even in the fundamental courses where there has been as yet no formal co-operation. It has been a means of further motivating and increasing the prestige of the required English courses, for those, preceded by the stress on English as a professional asset in the Survey of Agriculture, are succeeded by the concerted drive for good English in the professional courses in the third and fourth years. This year of co-operation has increased the responsibility of the entire teaching staff of the College for requiring good English in all the written work. The year's activity has shown that the instructors' part in holding the student to acceptable standards of expression cannot be overrated. It is a demonstrable fact that there is a direct relation between the attitude of the instructors in the professional courses and the quality of the English in the term papers they receive from their students. If they participate actively and definitely in the means of securing acceptable English, the students are stimulated to maintain the kind of expression that will make for distinction in their professional discussions. With a strong tradition in the whole college, and a rigid rating of the English by the professional instructors, the students cannot slump and do slipshod writing when the incentive of credit in English courses is no longer present.

The success of the first year's activity in co-operation would seem to indicate that the method is constructive and effective. The consultant made contacts with all the instructors in the professional courses. The special projects, especially those relating to outlining and specification writing, have been far more effective than could be foreseen. Future considerations include the best means of consistently following up the methods of this first year. These will be directed toward permanent self-sustaining means of evaluating English by the instructors in the professional courses. The best way must also be discovered to aid those students who do not respond to the co-operative method and whose English remains conspicuously poor. There will be a few. The effects of the whole project reach beyond maintaining an acceptable standard of English throughout the College. It has aided in developing good reading habits, and will improve teaching.

The staff to administer this project has not been a large one. One member has been a representative of the College, in this instance the junior dean, who with the point of view of the College of Agriculture, has interpreted the Department of English to his College, who has made the contacts for the consultant, and has counseled generally. Much credit for the success of the project should be given to the College representative. It would have failed without him. The second member has been an

experienced teacher in English who recognized the functional uses of English and was accustomed to planning courses to meet the needs of professional students. The third member, the English consultant, has been responsible for teaching the English course. Each has played a distinct part in the project. With a larger administrative staff the work, in the opinion of the writers, cannot be well unified.

Under conditions similar to those that have been developed here at Ohio State University in the College of Agriculture such co-operation in English could be adapted elsewhere. Yet no attempt at a co-operative project in English for an entire college should be undertaken until there is evidence of unity of objective both on the part of the college and the English department. Preliminary study and analysis of the whole problem from both sides cannot be overemphasized. The English course must be closely related with the others in the professional curriculums, yet it should keep its identity. The sections in English should be segregated so that they may be unified by professional ambition and interest. Those directing the English work should have the opportunity to become familiar beforehand with the writing demands of the College. Similarly, the teaching staff of the College should be informed as to what the English courses contain and what they can expect from the students after they have received credit in the required courses. A definite program should keep the objectives of the project well within the range of actual attainment. Too much should not be attempted at the start. The project should not be considered complete or self-sustaining until it has been tried over a sufficiently long period to demonstrate that the procedure evolved will maintain permanently acceptable English in the students' work throughout the entire college course. Even then, the English consultant will have to be available for aiding in unusual cases and for collaborating with the teaching staff on new specifications for individual courses.

· With the · Technicians ·

Scientific Method In Chemistry Laboratory[1]

Many instructors speak of other outcomes of teaching as being fully as important as the acquisition of information, but strangely enough their curriculum materials and teaching methods emphasize the accumulation of information. Mr. Garard points out in the *Journal of Chemical Education* for January that one of the important results of instruction is the ability to apply the scientific method, and that laboratory work has failed as a method for learning to use the scientific method. Twenty-eight laboratory manuals were examined. Most of these manuals "instruct the student to do something and then to answer questions which can be answered only from the textbook or the lecture notes." Few go so far into the scientific method as to state the problem of the experiment or to illustrate the scientific method.

Laboratory work is a method of learning by which students actually come in contact with experiments from which data are derived, and by which students learn how to learn things. One essential feature of the scientific method is the control of experimental conditions so that the results of the experiment may reasonably be attributed to the variable factor. Mr. Garard suggests some helpful methods for improving the present laboratory manuals. He adds that "perhaps laboratory work as here outlined covers fewer substances than the more usual type, but, in the author's experience, it leaves the student with a far better grasp and appreciation of the science of chemistry."

[1]Reported by Fred P. Frutchey, Ohio State University.

Scientific Method in Biology Instruction[1]

In the biological field at Ohio State University, four aspects of scientific method are considered to be of importance, the recognition of the problem, the planning of experiments to test hypotheses, the drawing of reasonable conclusions from experimental data, and the application of verified conclusions in solving specific problems. Although the scientific method is a general procedure consisting of at least these four aspects, each is considered in teaching students because some students can draw reasonable conclusions from experimental data but cannot satisfactorily apply principles in solving new problems. In other words, students can be good in one aspect of scientific method and relatively weak in another. In diagnosing students' difficulties in applying the technique of science, it is helpful to evaluate each aspect separately so that attention can be directed toward the aspects in which students need improvement.

Each phase of the scientific method is further defined so that the meaning of each phase is made clearer to students. For example, in planning experiments to test hypotheses students should be taught to select the factors to control, and to devise methods for controlling these factors. Just as it is important for the student to define his problem for investigation, it is also important that each aspect of the scientific method be defined in terms of behavior so that he will know more clearly what the scientific method means. The term "behavior" is here used in the broad sense—mental, manual, social, and emotional.

Laboratory work is one method by which students can learn one or more of these four aspects of scientific method. Other methods of learning are by demonstration, illustration, lecture, discussion, practice materials, and reading. These may take place in the classroom and outside the classroom as well as in the laboratory. The effectiveness of each of these learning exercises for each aspect of the scientific method can be measured by experimentation.

Sectioning French Classes

The scores on the sectioning test used in French classes at Goucher College are as reliably predictive as the marks at the end of the first semester, for they forecast achievement in French courses as reliably as the first-semester marks forecast those of the second. The results of three years' use of this sectioning test are appraised by a variety of measures—by the various correlation coefficients found in similar studies, by comparison with semester marks, by correlation with intelligence-test scores, and by correlations between high-school and college marks. By the use of this test the majority of the best students are placed in the best group, and the majority of the poorest students are placed in the poorest group, although the test is more reliable for high scores than for poor ones. This study bearing the title, "The Use of Achievement Tests in Sectioning Students," is reported by Louise C. Seibert and Eunice R. Goddard in the *Modern Language Journal* for February.

Adult Ability

The mental abilities of adults are commonly thought to reach their height in the twenties and to decline from then to senility. Different results were found when between five and six thousand adult part-time students at the University of Minnesota were tested in two abilities, vocabulary understanding and paragraph reading. From this large group 641 adults were selected to provide a similar distribution according to five-year groupings from sixteen to seventy years of age. The members of each five-year group were selected according to years of schooling and occupational status on the basis established by the seventy-three members of the fifty- to fifty-four-year group. When the scores on the two tests were plotted it was found that the curves for vocabulary ability

went up with age, while the curves for paragraph-reading ability went neither up nor down. This study, "Mental Ability over a Wide Range of Adult Ages," is reported by Herbert Sorensen in the December *Journal of Applied Psychology*.

Direct Prediction

The American Council Psychological Examination should not be used for differential predictive purposes when college marks are the criteria is the opinion expressed by David Segel, collaborating with J. R. Gerberich, in the December issue of the *Journal of Applied Psychology*. These collaborators reach this decision after computing correlation coefficients, which were zero or negligibly small, between scores on the parts of the American Council test and the differences between college marks in English, foreign languages, and mathematics. If objective tests are used to measure students' ability, however, the American Council test shows some differentiating power. Hence, it may be possible to select tests for a general battery similar to the American Council test which will have differential and at the same time direct predictive power.

Exemption from Examinations

Three experiments in which the attempt was made to measure the effect of exemption from the three-hour semester examinations on students' achievement in Applied Mechanics 1, Mathematics 1, and Mathematics 2, in two departments—Applied Mechanics and Mathematics—are reported by Mr. Remmers, of Purdue University. The 811 students involved in the experiment were enrolled in the School of Engineering. The control of other variables than the one being investigated was obtained through the use of the technique of paired groups. Achievement was measured in terms of the usual types of examinations given in the two departments plus certain objectively scored examinations, which were used to eliminate possible individual or departmental biases in marking. The average achievement of the experimental and control groups in each of the three courses was studied during the investigation, as well as achievement at two levels of ability and the permanence of learning over varying periods of time after completion of the courses.

In Applied Mechanics 1, a course taken chiefly by engineering Juniors, those eligible for exemption showed a slight tendency toward higher average achievement in the first half-semester. The differences were not completely reliable, however. In the second half-semester, this trend toward higher average achievement was somewhat more pronounced. The nearness of the goal (possible exemption) seemed to exert an appreciable influence on the measured results of the experimental variable.

At the higher levels of ability—those having semester marks of *B* or better—the trend toward higher average achievement in the first half-semester was greater in absolute amount than for the two groups.

The differences were only about as reliable as those for the two groups.

At the lower levels of ability there was no consistent trend in the first half-semester, but in the second half-semester even students who had no reasonable prospect of meeting the requirements for exemption showed a trend toward higher average achievement. The results for the entire semester indicated that the prospect of exemption from the final examination was a positive motivating factor as measured by achievement during the semester.

On an objectively scored test given approximately eighteen days after the end of the first semester the average difference had practically disappeared for the group as a whole. Even for the abler students the average difference had lessened. After an interval of one semester the differences for both levels of ability disappeared. Evidently, such differences as were caused by the possible exemption from the final examination were of negligible permanence.

In Mathematics 1 no hint of a trend appeared in the differences in the average results of all students during the first semester, and no consistent or reliable differences were shown when only the abler students were compared during the first semester. This was also true for the students of lesser ability. In trigonometry, the students not eligible for exemption showed a reliable superiority on an objectively scored measure of ability after an interval of approximately one month, but this advantage practically disappeared after the lapse of three and one-half months. In Mathematics 2 there was a slight trend toward superior achievement on the part of the abler students during the semester.

Mr. Remmers says in the concluding paragraphs of his monograph, *Exemptions from College Semester Examinations as a Condition of Learning:*

> . . . one is forced to conclude that any observed differences in achievement are not particularly impressive, especially when one takes into account the fact that after even a relatively short . . . interval the experimental and control groups again reverted to substantial parity of achievement. . . . While the present results cannot be generalized for all courses, the writer would hazard the hypothesis that in our present semester-course organization . . . exemption from final examinations makes relatively little difference in the amount, the quality, or performance of learning, at least as measured by current types of tests and examinations.

Forms for Unit-Cost Studies

The most recent bulletin compiled by the National Committee on Standard Reports for Institutions of Higher Education,[2] entitled "Suggested Methods and Forms for Use in Unit-Cost Studies in Colleges and Universities" is being distributed in an experimental edition. The Committee expresses the hope that institutions and individuals may be willing to co-operate in testing out the procedures suggested and by making any criticisms which may arise out of experience with the trial proposals therein offered.

[2]For reviews of earlier bulletins *see* JOURNAL OF HIGHER EDUCATION, III (February and October, 1932), pp. 97–98, 381; IV (November, 1933), p. 435.

Unless the cost studies of different institutions have been computed accurately and according to identical procedures, they cannot be compared. Furthermore, institutional comparisons are valid only when institutions of approximately the same size, scope, and organization are compared.

The determination of costs may well be considered one of the first steps in a complete analysis of the administrative and financial practices within an institution. Variations in costs between departments of instruction, schools and colleges, curriculums, and levels of student achievement, or variations in costs for the institution as a whole over a period of years, should lead at once to a further examination of the factors that determine costs. Chief among these factors are the following: size of enrollment; number of faculty members; salary schedule of faculty members; student-faculty ratio; size of classes; curricular offerings; teaching-loads; and efficiency of use of the facilities of the educational plant.

When properly conducted and carefully interpreted, unit-cost studies may also contribute something of value in the determination of student fees, in the preparation of the budget, in educational surveys, in the accreditation of educational institutions, and in the determination of desirable reorganization within an institution or within systems of higher education.

For institutions which wish to make computations of costs the procedures in this Bulletin are presented.

"*Gesamtkatalog*"

The *Gesamtkatalog der preussischen Bibliotheken* is a combined catalogue of eighteen German libraries and includes the titles of all books published before 1930 which are in the state library at Berlin, in ten principal university libraries, in four technical libraries, and in the Akademy library in Braunsberg.

The *Gesamtkatalog*, described by Hermann Fuchs in the *Library Quarterly* for January, is the work of nearly forty years. In 1898 the Preussische Staatsbibliothek in Berlin and the ten university libraries of Prussia began to catalogue their older holdings. Books acquired after 1898 had been listed by the *Berliner Titeldrucke*. The work was completed in the main in card form in 1926. Each card in the *Gesamtkatalog* indicates which of the participating libraries has the volume. Additions to this catalogue were made only in the case of books which had appeared before January, 1930. Acquisitions published after this date are published in the *Berliner Titeldrucke*, whose cards are to be combined in a new alphabetical list and published as a continuation of the *Gesamtkatalog*.

Up to 1930 this great catalogue was in card form; there was but one copy in existence which was kept in Preussische Staatsbibliothek. The decision to print it came as the result of a conviction that its great mass of listed books should be made available to the scholarly world and to the librarians who serve it.

The printing was begun in 1930, and three volumes have appeared up to June, 1933. It is estimated that the entire catalogue will comprise 150 volumes, each of which contains from 10,000 to 13,000 entries not counting cross-references.

The editing of the *Gesamtkatalog* is done by a special staff, and up to the completion of the third volume this staff consisted of one scientific official and seven assistants. On account of lack of funds the personnel was so small up to the completion of the third volume that it would have been possible to get out but one or two volumes each year, but on January 1, 1933, the Rockefeller Foundation granted funds not only to double the editorial staff but to aid the participating libraries for five years making it possible to produce about three volumes each year.

Solicitations for subscriptions to date at 90 to 91 marks per bound copy have brought requests for 276 copies, but three hundred are required to insure against loss. Henry B. Von Hoisen, chairman of the Committee on Prussian *Gesamtkatalog*, in commenting on this great work in the *Bulletin of the American Library Association*, says that it deserves a sales-promotion campaign in the United States and that our "libraries both need and deserve the assistance which this catalog would afford in research, reference, and catalog."

A Letter of Criticism

The Assistant Editor who is responsible for this section of the JOURNAL OF HIGHER EDUCATION recently received this letter:

Thank you for the clipping [from the section, "With the Technicians," of the January JOURNAL] which is a review of my study of fraternity records. The review contains a misstatement, however. The 100 matched pairs were not selected on the basis of "equal scholastic ability." If they had been the rest of the article would have had little point to it. The 100 pairs were selected and matched "with respect to a composite index based on two entrance criteria"; that is, they were selected and matched on the basis of scholastic aptitude rather than on what I interpret equal scholastic ability to mean.

Very truly yours,
ANDREW H. MACPHAIL
Associate Professor of Educational Psychology, Brown University

We acknowledge that we misinterpreted Mr. MacPhail's original statement which appeared in *School and Society*, and we are anxious to bring its correction to the attention of our readers.

·The·Reporter·

FROM February 11 to 17, Temple University celebrated its fiftieth anniversary with a week of academic ceremonies.

THE University of Chicago Press has announced that due to an economy measure the *University Record* ceased publication on January 1, 1934.

THE creation of a new unit to be known as University College, which will take over all the work now carried by the University Extension Division and which will, in addition, grant the degree of Bachelor of Science in Business Administration is announced by Rutgers University. The new college will begin with a registration of fifteen hundred.

THE establishment of special courses for alumni on current economics and public speaking, to be given without charge, has been announced by Drexel Institute. Sixty Drexel graduates, both men and women, have already enrolled for the work, which will extend over a period of twenty weeks.

MORE than 125 professors who will instruct summer-school students at the University of Colorado will "take a chance" on getting their pay. Dean Milo G. Derham of the summer school explained that all overhead expenses, including salaries, would have to be paid from income for tuition. The professors, however, have expressed their willingness to accept contracts for instruction on that basis.

THE Casa de las Espanas, center of Spanish activities at Columbia University, was opened formally late in February. President Butler, who presided, said that the Casa would become the "general home of Spanish study and a place of assembly for those who pursue it." The building is a four-story house remodeled in Spanish style, and its sixteenth-century furnishings, the joint gift of Mrs. Frederick S. Lee, the Spanish government, and Columbia University, were assembled in Spain.

BRINGING to a conclusion the controversies that have recently upset the calm of Oregon institutions of higher education, Dean C. V. Boyer, of the School of Arts and Letters, has been appointed acting president of the University of Oregon, and Dean George W. Peavy, of the School of Forestry, has been named acting president of Oregon State College. Meanwhile, the charges against Dean Wayne L. Morse, of the University of Oregon School of Law, have been dropped by the Board of Higher Education.

A SPEAKERS' bureau has been established by Knox College, to be called the Knox Lecture Service, for which the College will make available fac-

ulty-member speakers on many topics for clubs, schools, and churches in its vicinity. Eighteen members of the Knox faculty are listed as speakers on a wide variety of subjects.

A DECISION of District Judge W. C. Davis, of Bryan, Texas, permits the Texas Agricultural and Mechanical College to continue to exclude women from admission to the College. He refused to a group of Bryan parents a writ of mandamus to compel the College to admit their daughters.

THE University of Southern California announces that beginning September 1, 1934, its school of social welfare will offer a graduate program leading to the degree of Master of Science in social work.

NEXT September, Greenwich, Connecticut, will have a progressive college of liberal arts, to be opened by Mr. George R. Hardie, and to be known as Greenwich College. It will offer a two-year liberal-arts program at the full college level for those for whom a four-year college course is not practical, and will be open to both residents and nonresidents.

THE Carnegie Foundation for the Advancement of Teaching, early in February, in co-operation with Purdue University, issued a volume under the title *Charters and Basic Laws of Selected American Universities and Colleges*. President Edward C. Elliott, of Purdue, as senior editor of the publication, was assisted by Mr. M. M. Chambers, of Ohio State University. The volume contains fundamental laws governing fifty-one representative higher educational institutions of the country, with an analysis of the leading court decisions affecting higher education.

A COMPLETE program of aviation instruction for students at Kenyon College and the establishment of a well-equipped landing field have been made possible by a gift of Mr. Wilber L. Cummings, of Springfield, Ohio. Port Kenyon landing field, which is adjacent to the campus, was dedicated on March 3.

IN THE spring of 1934 a National Conference on the Education of Negroes will be held under the direction of the Federal Office of Education. The committee to plan the Conference met on December 2 to make arrangements. Representatives of leading Negro colleges, universities, and secondary schools make up the membership of the committee.

THE Ohio State University Medical College celebrated the one hundredth anniversary of its founding, March 1 to 3, with a series of exercises which included addresses by outstanding physicians and medical educators.

BECAUSE of the depression the "prodigy class" of Northwestern University has decreased from five to two, according to a statement by President Walter Dill Scott late in February. President Scott pointed out that as soon as the financial emergency is over the University intends to go ahead with its plan to

make this class for precocious children a regular part of the University program. It of course calls for scholarships.

A study made by Mr. Harold S. Diehl, of the University of Minnesota, shows that the American woman is getting taller. No distinct type of male or female has developed, however, as exemplified by western and southern and eastern and even distinct college types. Mr. Diehl's survey points out that Stanford University co-eds are the tallest in the country; Smith College students, the heaviest; and those at Texas University, the slightest.

The admission of students at Dartmouth College in the fall of 1934 will be based on quality. A candidate must possess, according to the dean of Freshmen, first, "Character, accomplishment and personality which the selective process is designed to determine"; second, "His school history must indicate, both in content and accomplishment, that he is competent to proceed with the work of the freshman year." The old accumulation of credits, which was originally a guide for college entrance, the announcement points out, has long since become obsolete.

After a prolonged period of disagreement with the Barnard Student Council, Miss Gertrude Epstein resigned late in February as editor-in-chief of the *Barnard Bulletin*, semi-weekly student newspaper of Barnard College. The Council adopted a resolution calling for the establishment of an editorial board to control the policy of the newspaper, which will begin to function immediately and continue until the election of next year's editor in April. An open college poll recently resulted in students voting 157 to 38 in favor of "complete freedom in the editorial column." Miss Epstein said:

> Contrary to the decision of the college as expressed in the recent referendum, a censorship of *Bulletin's* editorial policy has been established by the Student Council.
>
> The *Bulletin* gladly accepted the recommendations of the College because its interests are inseparable from college interests. Student council, however, though it was familiar with the results of the poll, has taken a step directly contrary to the three-to-one vote for complete freedom of the editorial column.

The University of Minnesota announces that approximately four hundred sixty financially handicapped students have registered for the winter term assisted by $190,000 of Federal and state funds. An additional hundred students are being admitted to the schools of agriculture at the University farms, and one thousand other students will enter various colleges in Minnesota.

The University of Texas has secured a 30-per cent grant totaling $1,633,000 for the construction of the final unit of its administration-library building to replace the remaining part of the original main building in rounding out the building program of the University. All the funds necessary for these building improvements come from the sale of oil and gas from the

land endowment of two million acres which the University owns. The building will bring together in a central location all the administrative departments of the University, which are at present poorly housed and scattered about in several places. The architect provides for a tower of 31 stories or levels, to be used for book stacks and offices. The height of this tower will be 286 feet.

SPEAKING at a banquet given annually to the faculty by the board of trustees of the University of Chicago during January, Mr. C. Judson Herrick, head of the Department of Anatomy, discussed the problem of academic freedom as follows:

I think it fair to conclude that any influences which have obstructed the free growth of creative scholarship in the University of Chicago have not emanated from the board of trustees or from any other outside sources. The academic environment within which we work seems to be now as free from administrative restraint as our trustees can make it.

If our academic environment is not what we want it to be, it looks as if we must turn our inquiry inward. How have we ourselves, we of the faculties, used the opportunities available, how have we exercised our freedom?

AT THE meeting of the Association of American Law Schools in Chicago late in December, President Hutchins, of the University of Chicago, recommended the creation of a separate department of jurisprudence in universities which support law schools. President Hutchins observed that universities should seek to "educate" their law students rather than train them in practical matters which they can learn better in a law office. He remarked in part as follows:

The general principles of the law are derived from Politics and Ethics. The student and teacher should understand the principles of these sciences. They will not ignore the cases, the facts, or the social sciences. At least they will understand them. They will be educated.

I take it that an educated man knows what he is doing and why. I believe that an educated lawyer will be more successful in practicing law as well as in improving it than one who is merely habituated to fact-situations. His training will rest not on his recollection of a mass of specific items, but on a grasp of fundamental ideas. The importance of these ideas cannot be diminished by the whims of legislatures or the vagaries of practical politics. They are permanent and permanently effective.

BASED on statements from leading educators in thirty-five states and the District of Columbia, a survey just completed on building conditions in American colleges and universities indicates that a large percentage of our higher educational institutions are suffering from marked inadequacy in housing for students and academic activities.

The report of the survey, issued early in January by Hegeman-Harris Company, Inc., builders of structures in the educational field for Harvard, Yale, Dartmouth, Wells College, and others, reveals that out of 221 representative institutions, 65 per cent are in definite need of new construction or additions to, or rehabilitation of, existing structures. Only 11 per cent of the 221 colleges and

universities furnishing basic data for the survey reported adequate buildings throughout. The remaining 24 per cent did not disclose information sufficiently specific for an accurate index.

The data, which were supplied directly by the heads of the institutions concerned, show that the most urgent need is for student housing, mainly dormitories. The summary of the survey points out that

> needed construction for which estimates were made amounts to about $93,000,000. Allowing for a reasonable approximation of costs where a specific project is named but no estimate is given, the aggregate needs of schools that reported amount to about $135,000,000. If this is truly a representative cross-section of the country as a whole, the total needs of the nation are close to $900,000,000 and call for upwards of 2,200 projects and structures or additions or improvements to existing structures.

THE Wisconsin Alumni Research Foundation, of the University of Wisconsin, is appropriating in the neighborhood of $140,000 to the University for the present academic year. Of this, $120,000 is to be allocated to scientific research activities which otherwise would have to be eliminated because of the drastic reduction in University funds. From this sum between 60 and 70 important researches will be financed under the direction of 36 members of the faculty. The subvention will also provide for the employment of from 50 to 60 research assistants, many of whose appointments would have been ended this year because of lack of funds. The sum of $10,000 is also being allocated for the establishment of 25 post-doctorate research associateships. This will make it possible for recent recipients of Doctors' degrees to continue doing scientific work until they may be placed in academic or industrial positions. In the neighborhood of $8,000 has been given to the University for the establishment of a Department of Conservation, to be conducted in connection with the University arboretum—a tract of more than 400 acres of land which is being devoted to wild life, conservation, and propagation research.

The Wisconsin Alumni Research Foundation was established six years ago, and is a non-profit-making organization whose income is earned from patents which it holds on inventions and discoveries made by members of the Wisconsin faculty. Among the more important of these discoveries is the Steenbock process for the irradiation of certain basic foods and medicines, such as bread, milk, and cod-liver oil. Through this irradiation process, vitamin D is put into these foods and medicines.

AS A fraternity practice "hell week" was condemned at two institutions recently and brought about opposite student reactions. At Denison University, Granville, Ohio, the *Denisonian*, student newspaper, backed by the college president, denounced paddling, which is a part of "hell week," as an "inane piece of barbarism." Fraternity men, however, rose in defense of this charge.

Five faculty members at the University of Illinois upbraided "hell week" as "an institution which has no

place among college men." The interfraternity council president voiced his agreement with the opinion of the faculty members and expressed confidence that the rough-house informal initiation is disappearing. He committed himself as being against the physical and mental punishment which is still found in some houses.

THE faculty of letters and science of the University of Wisconsin announced early in January

That students who are candidates for the bachelor of arts degree, general course, may meet the requirement in foreign language either by passing the proficiency or intermediate examinations, as now prescribed for those graduating in 1934 and later, or by taking the required number of language credits, as in the past;

Likewise, that students who are candidates for the bachelor of philosophy degree, general course, may meet the foreign language option either by passing the intermediate examinations, as now prescribed for those graduating in 1934 and later, or by taking the required number of language credits, as in the past.

Before the adoption of the Fish committee report three years ago, the foreign-language requirement was 32 credits in two or more languages.

LATE in February, President H. J. Burgstahler, of Cornell College, Mt. Vernon, Iowa, announced that the Cornell Development Campaign begun in 1921 has come to a successful completion. The Rockefeller General Education Board in 1921 made a grant directly to the Cornell endowment provided it was matched by over $1,000,000 from other sources, and this now has been achieved. Endowment resources were not the only aims of the Cornell Development Campaign, since nearly $300,000 in campus improvements has been spent at the College.

THE establishment of a School of Education has been announced by Syracuse University to absorb its present teachers' college and to take charge of all teacher training at the University. The faculty will consist of about forty members including approximately twelve from the College of Liberal Arts, ten from the present teachers' college, and the remainder from other colleges in which prospective teachers are enrolled.

TWO buildings at the University of Denver recently were sold for $145,000 of delinquent special improvement taxes by the Denver manager of revenue. The University administration claimed a tax exemption, but the municipal authorities insisted that improvement taxes are not actually taxes but benefit assessments which must be paid.

RECENTLY DePauw University abandoned its military-training unit, the last Methodist controlled college with such an organization. The decision to request the government to withdraw the unit was arrived at by a vote of 33 to 2, by the board of trustees. The action was in accordance with the views of the Methodist Church on military training as expressed in resolutions emanating from the General Conferences which were held in 1928 and in 1932.

·Editorial·Comments·

Service and Profit

THE profit motive is widely accepted as the major incentive to effort. Large salaries and generous bonuses are defended on the ground that they are necessary to elicit the best abilities of leaders of industry. Contrariwise, it is asserted that if profits are eliminated services deteriorate. State medical services according to such arguments would be inferior in quality to those administered by private medical agencies; when fields of business are taken over by the government and run by men with modest salaries, the management will deteriorate.

The implication that profit is the major motive of extraordinary endeavor is not valid. The thesis can be defended that other incentives are substituted for profit. Many men want no more than a modest living and a sense of security in old age. A small salary and a retirement allowance are entirely adequate to elicit their best efforts. The university professor belongs in this class. Working upon research that he is not compelled to carry on, training ninety per cent of the research workers of the nation, he is busy in a thousand ways upon problems involving intensive study; yet these activities bring financial compensation only rarely. The regular army is a trained organization of great efficiency. When a hard job is to be done involving industry, organization, and honesty, the army within the limits of its training and point of view invariably performs a workmanlike job. Army officers earn small salaries and receive a modest pension. From the financial point of view millions of men and women are entirely satisfied to do their best if they are guaranteed enough for modest livelihood.

Not only do salaried people do a dependable job, but they do most of the brilliant jobs. The research in industry is carried on by inventors who turn over the rights to their discoveries to their employers without more than ordinary recognition. They would rather work at smaller rates in a laboratory where they can create than to work for themselves in less well-equipped surroundings. The discoveries in cancer, diabetes, and health are made by men who ordinarily give their discoveries to the world. Generally speaking, they are satisfied to obtain the respect of the men who can appreciate their skill and intelligence. Prestige is probably a more powerful incentive than money. Security, love of work, and prestige to millions of men are more important incentives than the hope of wealth.

It is apparent that, as the state takes over more and more of the activities which are now performed by individuals, there need be no fundamental fear that in the long run the work will not be adequately cared for. In one hundred years in a

field of free competition, the public schools have practically eliminated schools run for profit. There are few commercial schools, dental schools, medical schools, elementary schools, or academies run for profit. It has taken one hundred years to bring this about, but a century is not a long period in history. The post office is an institution that is efficiently run. The army is an outstanding example of efficient public service. Numerous cases can be cited of outstanding governmental agencies without a profit motive, which are as capable as business organizations with their financial rewards.

It is apparent, also, that if the government takes over more of the duties now performed by private agencies, the crucial problem will be the training of its public servants. Where public agencies now show conspicuous inefficiency the major cause is lack of training. The congestion and uncertainties of administration now observed at Washington can be laid primarily at the door of the inefficiency which follows when men, however honest and intelligent, are placed in positions for which they—and frequently no one else—have had neither adequate training nor experience. If the emergency had permitted them to take time to plan before they acted, the results would have been better. But we shall not be forever faced with emergencies, and people can be trained effectively to carry on governmental activities. These agencies are not ineffective because they are governmental; their inadequacy lies in lack of training of the persons who run them.

IN THE light of the present trends toward increased participation of the government in social activities, the colleges and universities have a clearly indicated task. As now they are the major agency for training research workers, they will have the opportunity in the future to become the chief sources of trained public servants. Political influence now plays a greater part in public affairs than it will in the future, because a trained personnel inevitably crowds out an untrained personnel in the end. A million public servants are employed in the public schools with a minimum of graft. The politicians know that by and large the schools are to be left alone. It is difficult to reach army officers. The federal department of justice usually gets its man. The public-health workers are in the main efficient people.

As the universities and colleges graduate increasing numbers of men and women trained for public service, the gap between an untrained governmental personnel at its worst and alert business organizations at their best will inexorably grow narrower. The weakness of state operations is not inherent in the state, it is caused by lack of training and ignorance about what to do. When men are properly trained, we may expect them to produce their best under the stimulus of security, prestige, and love of work.

W.W.C.

..Reviews..

An Aid to the State

THE STATE AND HIGHER EDUCATION: PHASES OF THEIR RELATIONSHIP, *by Fred J. Kelly and John H. McNeely*. New York: Carnegie Foundation for the Advancement of Teaching, 1933. xii+282 pp. Gratis.

Private as well as public institutions of higher learning are interested in the type of service they render to the state. The question arises, May the institutions of a particular state, both private and public, so co-ordinate their programs that undesirable duplication may be reduced to a minimum and the aggregate constitute a unified system of higher education? The three studies reported in this volume do not attempt either to answer this question or "to establish any single contention." The data presented in each of the three studies do reveal, however, the seriousness of the present conditions, and do indicate trends of development without an evaluation of the desirability of these trends.

Part I is a study of the institutions of higher learning in ten carefully selected states, to reveal the great variation among the states as to number of institutions, types and locations, methods of control, and curricular offerings. For the public institutions, the information also includes the agency to which requests are made for state funds, of control of purchasing and printing, and the budget agency. For the private institutions the information includes the plan for incorporation and the jurisdiction by the state after incorporation.

Part II considers the trend toward unified control of state education. It points out that New York established the Regents of the University of the State of New York in 1784 and delegated to them the actual management of colleges of the state. It points out that this policy was soon changed so that colleges were to have their own boards of control but were to be chartered by the Board of Regents and under its supervision. Other states, as institutions of higher education were formed, quite generally created a new board for each institution. There developed in higher education an institutional loyalty. "This multiplicity of governing boards of educational institutions in each state could hardly be expected to build up a co-ordinated system of higher education for the State."

Part II also gives a brief account of the attempt on the part of certain of our states to articulate and to co-ordinate the state program of education. South Dakota and Montana have had, since statehood, single boards in charge of their several higher institutions. In 1905 Florida adopted the single-board method of control. Iowa, West Virginia, and Oklahoma soon followed, as did Kansas, Mississippi, and Idaho. North Dakota in 1919, Oregon in 1929, and North Carolina and Georgia in 1931 adopted the single-board plan.

The following abstracts from the summary of Part II indicate the significance of the trends discussed:

> . . . various plans were evolved to meet the differing situations, but three types may be mentioned: (a) the board to control only the institutions of higher education; (b) the board to control higher education and to supervise the public schools; (c) the board to control higher education and also the penal and charitable institutions. The states do not fall precisely into these classes, but the categories bring out the fundamental differences.
>
> . . . A second phase of the movement seems now to be in the ascendancy, namely, the centralizing of the executive control of higher education in a single officer, usually a chancellor. Montana created the office of

chancellor in 1913. It was the first State after New York to unite several institutions under a single executive officer. After 1913, no other State followed Montana's example until 1931, when Georgia created the position of Chancellor of the University System of Georgia. In 1932 Oregon and Mississippi created such an office (although Mississippi had not yet chosen a chancellor in December, 1932) and North Carolina has consolidated three separate institutions into the University of North Carolina and placed a president in charge. . . . The actions of these five States offer strong support to the contention that a single board without a single educational executive will often fail to bring about effective coordination of the work of the several institutions in a State. A lay board is likely to prove helpless in its efforts at coordination when it receives reports and recommendations from several presidents of institutions independently.

Part III is a study of certain basic data which may indicate significant differences in the ability of the states to furnish and support higher education.

Students of higher education, as well as college administrators and legislators, will find in this volume a vast amount of valuable information not previously easily available—information that will be of great assistance in the development of an educational program of the state.

W. W. CARPENTER
University of Missouri

A Study in Achievement

WALLACE CLEMENT SABINE; A STUDY IN ACHIEVEMENT, *by William Dana Orcutt.* Norwood, Massachusetts: Plimpton Press, 1933. xiv+376 pp. $5.00. (Privately printed)

This is the life story of one who has most appropriately been described by a prominent captain of industry as "the least known great man America has produced." Wallace Sabine was constitutionally modest and retiring, and both his training and the nature of his work caused him to shun the public eye. He shrank from the limelight and all acclaim, and his astounding achievements in science and practical affairs would have been quite impossible without seclusion; yet it seems incredible that even now relatively few people of education have become acquainted with his solution of an age-old problem and his creation of an absolutely new science.

Sabine began his epoch-making investigation while still in his twenties, and before he was thirty-five he had obtained the answer. He was originally requested to examine the wretched acoustical conditions that had appeared in a lecture hall at Harvard University despite every effort to render them effective. The utmost hoped for was that he might partially remedy that particular situation, but he went far beyond the correction of defects in a single auditorium and extended his researches to the entire problem of sound transmission and its absorption wherever produced.

Sabine's progress toward a successful outcome cannot be even outlined here, but at every point it exhibited a marvelous combination of ingenuity, scientific accuracy, indefatigability, and patience. Without dropping any of his classes, lectures, or other duties, he patiently labored under untoward conditions for several years. In the end he was able to analyze apparently intangible sounds into elements he could measure, and to formulate a "constant" that would express the relation between residual sound and the amount of absorptive material. Hence he came to declare with entire confidence that by the application of the scientific principles he had deduced, successful results could be provided under all circumstances, and within a few years he was being consulted concerning the acoustics of halls, theaters, and buildings in all parts of the United States and the leading countries of Europe. Auditoriums were everywhere being constructed free from all echoes and resonances, and in the case of those already built faulty acoustics were being corrected. Long before his death Sabine had become known as the sole authority on architectural acoustics throughout the world.

But despite the fact that there was no one else in his field, the great scientist always declined to profit financially from his discoveries or to give up his university chair in order to accept a lucrative commercial position. He maintained that all secrets wrung from nature belonged to the world, and he steadfastly refused to take out any patent until his processes were twice nearly stolen from him. He did not, however, confine himself to the laboratory or to the study of acoustics in civil life. When the World War broke out, he hastened to apply his principles to the sound problems connected with submarines, airplanes, and intercommunication between military lines, and induced France, England, and Italy to organize a joint commission to deal with these matters. Through his own war-invented camera he photographed terrain from an Italian bombing plane and disclosed thirty-two hitherto unknown German hangars. As soon as his own country joined in the war he returned home and gave a most complete account of hostile aviation and submarine activities to the authorities at Washington. Once discovered by the War Department, he was appointed Director of the Division of Technical Information in the Bureau of Aircraft Production, and, though mortally ill as a result of continual overwork in the interest of humanity and civilization, he refused to allow himself any surcease of duties either to the nation or the University until he was claimed by death. A hero and a martyr, he passed to the Beyond when only fifty. As stated by one of the greatest of our scientists: "His life was sacrificed in the Great War quite as definitely as though he had been killed in the trenches. He literally gave his life for his country."

These are but two phases of an amazing life. Every other side of Sabine's character and career was in its own way equally idealistic and strong. His skill and power as a teacher and his devotion to his students alone would have made him famous. His most abstruse courses were pervaded with a tone of humanity, and he drew young men to his subject through the charm of his personality and his interest in each of them. It has been declared by Channing, the historian: "I am very sure that if I had studied physics with Sabine, I should have become a physicist." With all his capacity in research, this brilliant scientist published comparatively little, but gave his time unsparingly to teaching. Likewise, although he proved a conspicuous success as a dean, he was reluctant to undertake administrative duties. And, after devoting himself to this work for seven years, he was prompt to advocate the merger of the Graduate School of Applied Science with the Institute of Technology, although he knew that the step would automatically terminate his office. Of Sabine the educator, as of Pestalozzi, it might be said: "Nothing for self; everything for others." Equally beautiful are the pictures the biography gives us of his tenderness, loyalty, and devotion as a son, husband, father, and friend.

The book is well adapted to a revelation of character and accomplishment. Long before the reader has finished, he feels himself *en rapport* with the subject of this sketch. While the biographer has treated the various aspects of the man in separate chapters, his descriptions overlap and dovetail, as happens in real life. The work is written in a smooth and fascinating style, but is interspersed with source material from diaries, letters, estimates of friends, newspaper records, magazine articles, and scientific papers, which, while often detailed and repetitious, give an air of genuineness and vitality to the account. Particularly illuminating is the way in which Sabine's remarkable mentality, personality, and achievements are analyzed and accounted for by the mixed elements in his heredity and by the environmental forces of his early life and formative period of education. Of all these influences the strongest, most touching, and instructive seems to have been that exerted through the intelligent and devoted ministrations of his mother. In a twofold sense Anna Ware Sabine gave her son to America as a happy blending of the natures of Mark

Hopkins, Thomas Edison, and Nathan Hale. Thanks to Mr. Orcutt's efforts, he should no longer remain our "least known great man."

FRANK PIERREPONT GRAVES
University of the State of New York

Oriental Nationalistic Movements

THE BEGINNINGS OF TOMORROW, *by Herbert Adolphus Miller.* New York: D. C. Heath and Company, 1933. ix+310 pp. $2.00.

This is virtually a bird's-eye view of the reactions of the different peoples of Asia to European imperialism and Western civilization. The author stands quite outside the myths and illusions which serve as justification for subjugating Orientals and is altogether in sympathy with Oriental resistance to Western aggression. He has first-hand knowledge of the nationalist movement in China, Siam, India, Egypt, Palestine, and Turkey and is in close personal contact with most Oriental leaders.

It is not easy to see great current issues from the point of view of posterity, but Mr. Miller is more successful than anyone I know in seeing the confused international politics of our time as the intelligent historian of 2000 A.D. is likely to see them. Expectation of economic advantage may be the unavowed underlying motive of the drive of the empires upon the Asiatic peoples, but their resistance can be stated and accounted for only in sociological terms. Nobody but a sociologist who is also a social psychologist, as our author is, can truly appraise the various motives which inspire Oriental nationalist movements.

Miller's conception of a great society now in the process of evolving, every racial or national segment of which will be at once conscious of and conditioned by every other segment, seems thoroughly sound. On the other hand, his concept of a cosmic process bound in the end to work out a cosmic good is as illegitimate as the theory of the divine purposes which he puts it in place of. Nor can I esteem his prediction, "It is possible, however, that the attitude of the white race toward the yellow race will gradually drive the Chinese and Japanese together" (page 69). The destruction of twenty-four thousand lives, chiefly Chinese men, women, and children, in the Chapei district of Shanghai and of property estimated at $1,500,000,000 (Chinese) by Japanese war vessels will leave a deep chasm between Chinese and Japanese for a long time to come. Certainly, this generation of Chinese has never been so maltreated by any European power.

EDWARD ALSWORTH ROSS
University of Wisconsin

University of Chicago Survey

CLASS SIZE AND UNIVERSITY COST, *by Floyd W. Reeves, Nelson B. Henry, and John Dale Russell.* Chicago: University of Chicago Press, 1933. xxii+229 pp. (University of Chicago Survey, Vol. XI) $2.50.

The reader who takes up this monograph, which is Volume XI of the University of Chicago Survey, wishing to obtain scientific evidence on the relative effectiveness of college instruction in classes of various sizes, will be disappointed. He must turn to Volumes III and IV for the limited evidence of this sort deducible from the survey.

Volume XI is an administrative study of current class-size and instructional cost at the University of Chicago, and represents an effort to suggest reorganizations which will result in a more efficient utilization of instructional and physical resources. It is an analysis of opportunities for two kinds of administrative economy.

It is easy, and all too customary, in such an administrative approach, to ignore important factors in the class-size situation. This study, except for the acknowledged omission of experimental evidence on instructional outcomes, takes into consideration those factors. Part I, after explaining the curricular organization of the University, analyzes the class-size situation according to levels, colleges, quarters, fields of study, and

courses. The situation supports the contention of President Benedict, of the University of Texas, that in any institution which attempts to fulfill the functions of a true university, small classes are a bigger problem than are large classes. The survey committee nevertheless felt that some economy could be effected by reducing the number and frequency of duplicate sections.

Part II essays the obstinate and complicated task of devising a unit-cost basis for administering the instructional program. Again, the analysis differentiates between the various functions, levels, and fields of study. While the unit-cost technique was designed for a single institution, it represents a sincere effort to arrive at instructional economy on an equitable, humane basis, the essential features of which may profitably be adapted to comparable studies in any institution of higher learning.

EARL HUDELSON
West Virginia University

THE ORIENTAL INSTITUTE, *by James Henry Breasted*. Chicago: University of Chicago Press, 1933. xxiii+455 pp. (University of Chicago Survey, Vol. XII) $4.00.

This book is both a record and a forecast. It relates the foundation and growth of the Oriental Institute of the University of Chicago; within a single generation the Institute has risen from an extremely modest start to a commanding position in Near Eastern research. It is now fortified with adequate financial resources, a very competent staff, and excellent scientific equipment. Its constantly widening range of activities is exemplified by expeditions to Egypt, Palestine, Syria, Asia Minor, Irak, and Persia. The home staff is engaged in co-ordinating the mounting mass of new evidence, and in evaluating and preserving the older sources. It may be that the most ambitious and timely undertaking of the local headquarters is the monumental Assyrian dictionary, a truly heroic task when it is realized that this work must furnish an exact digest of hundreds of thousands of passages scattered throughout the unwieldy cuneiform literature. But the work accomplished thus far, both at home and afield, is but a foretaste of more important things to come. The whole is aimed at throwing further light on the beginnings of Oriental history in the widest sense of the term, and these beginnings represent mankind's earliest and fundamental civilizations. The Institute is dedicated to the amassing and preserving of evidence bearing on these important but still somewhat shadowy periods in human life. For all its romanticism and fascination the undertaking is uniformly sound, and its present and potential usefulness to science is enhanced by the employment of the most modern scientific methods.

The book, which is splendidly illustrated, is explicit on all these points. It fails to give, however, a correct picture of the part which its author played in making the Institute what it is today. It is safe to say that without Breasted's vision and enthusiasm, his understanding of the innumerable practical and scientific problems involved in so vast a plan, the Institute would still be a dream rather than a reality. The reviewer notes this reticence, but cannot, of course, deprecate it.

The reader will welcome the brief historical introductions to each section of the Near East in which the Oriental Institute is at work at present. The archaeological summaries, however, seem to me a little one-sided. Emphasis is placed on the accomplishments of the Chicago excavators and explorers, while the achievements of the other archaeologists are mentioned only occasionally. To be sure, the author is primarily interested in this particular book in the work of his institution. In as much, however, as the introductions are meant to be general, the uninitiated reader may get the wrong impression as to the amount of research done in the other centers of Oriental studies.

Breasted uses the term "Egypto-Babylonian" as a comprehensive name

for the ancient cultures of the Near East. "Mesopotamian" would have been a better choice for the second element of the compound, because Babylonia imposes undue chronological and geographical limitations. The Asiatic cultures to which the author refers were in evidence long before Babylon came into prominence, and they extended far beyond the limits of Hammurabi's empire. Shergat (ancient Ashur) is no longer the railhead of the northwest Bagdad line as the author states (page 47). The new terminus is Baiji, 75 miles south of Shergat.

But details of this kind are poor pickings indeed. The book of Mr. Breasted is a fascinating chronicle of a foundation that is destined to add many chapters to the early history of mankind.

E. A. SPEISER
University of Pennsylvania

A PLATFORM FOR LIFE, *by Ernest H. Wilkins*. Oberlin, Ohio: Oberlin Printing Company, 1933. 118 pp.

College administrators make frequent speeches to all sorts of groups, and occasionally one of them brings his addresses together in a volume. This little book by the president of Oberlin College is such a compilation of addresses. All of them were delivered to the students of Oberlin College during the first five years of his presidency. They range from discussions of American and German politics to observations on the good life. Individuals who talk frequently to students will find these observations suggestive.

A Letter to the Assistant Editor

DEAR MADAM,

Thank you for sending me the cutting from your JOURNAL OF HIGHER EDUCATION, with Mr. Richardson's review. I must thank him and you for giving so much space to it.

I am puzzled, however, to know in what way he thinks I confused objective achievement tests with intelligence tests, unless possibly there is some different sense in which the term "objective achievement test" is used by Mr. Richardson from what is customary here; but I should be glad of any definite reference to a paragraph in which any confusion appears to Mr. Richardson to take place.

I may add that he is quite wrong in his assertion that the book was "obviously addressed to Headmasters." These examinations in England are in charge of local Education Authorities, and the Headmasters may have little to do with them. My book was intended for all students of Education who are interested in these important problems of selection, and with the whole question of examinations.

Unfortunately, Mr. Richardson is wrong again in suggesting that all the tests were of the essay type, as he does in about line 12 or 15 of the review. It is true that I have criticised tests of the essay type in Part 1 of the book, and that some of the English examination papers included questions of the essay type, but it is very misleading to write as though *all* the tests were of the essay type, particularly as every examination would include also an examination in Arithmetic.

Finally, in reference to the last sentence of the review, I suggest that "interpretative discussion" is justifiable even where there is no proof; and I should be glad on the other hand if Mr. Richardson would point out any definite *conclusions* that are drawn, but which are unjustified by the data.

I should be glad if you could find room for this reply to Mr. Richardson in your JOURNAL.

Sincerely yours,

C. W. VALENTINE
Professor of Education,
University of Birmingham

In the Lay Magazines

"Preparing College Women for Leisure," by Flora B. Ludington, *Library Journal*, January 15, 1934.

Leisure should not be spent in idleness but should be filled up with some "non-remunerative work in science, in letters, in art," or some other occupation which will enrich everyday living, and where better can training and interest for worthy use of leisure be started than in college?

This article by a college librarian tells how she influences the girls who come to her for books to read, or to study, and how she often turns them into interesting and unlooked-for bypaths by a mere suggestion. The librarian who is asked to help a student find a book for a course paves the way for future consultation if she shows the proper enthusiasm and interest, and she can often supplement the assignment by suggesting something which may start the student off on an entirely new and interesting trend of thought and reading which will carry on through life. "Our task," says this librarian, "is to help the immature student of any age to find that which he can truly like."

"The Sheriff at the Fraternity Door," by William E. Berchtold, *New Outlook*, January, 1934.

Fraternities on many campuses are getting first glimpses of the depression. Years ago, in the glowing twenties in fact, the boom of Big Business reached into the colleges and as a result, countless fraternities and sororities all over the country are threatened with bankruptcy.

The article tells interestingly of the wildcat schemes on which the unsuspecting youths of the twenties were led to build magnificent houses in some cases with as little as $600 cash, and of how the youngsters of today are being saddled with these burdens which are not of their own making.

Will the fraternities weather the storm? And, if not, what will happen? Fraternities have automatically solved the

Recent Publications

An Experimental Study of Rewards
By E. L. Thorndike and Staff of the Division of Psychology, Institute of Educational Research, Teachers College. 72 pp. Cloth, $1.50.

Furnishings and Equipment for Residence Halls
By Mary De Garmo Bryan and Etta H. Handy. 95 pp. Paper, $1.00.

House Management Problems of Fraternities and Sororities
By Barbara Reid Robson. 93 pp. Paper, $1.00.

Some Problems in the Provision of Professional Education for College Teachers
By Harold Moore Byram, Ph. D. 210 pp. Cloth, $2.00.

A Study of the Relationship Between the Vocational Home Economics Teacher Training Curricula of a Group of Women's Colleges and the Expected Responsibilities of Beginning Teachers
By Laura Veach Clark, Ph. D. 82 pp. Cloth, $1.50.

The Internal Administration of the Liberal Arts College
By James S. Kinder, Ph. D. 160 pp. Cloth, $1.50.

Internal Administrative Organization in Teachers Colleges
By Robert H. Morrison, Ph.D. 183 pp. Cloth, $1.75.

Philosophies of Education Current in the Preparation of Teachers in the United States
By Francis Edwin Peterson, Ph. D. 147 pp. Cloth, $1.50.

Problems of Students in a Graduate School of Education
By Dorothy C. Stratton, Ph. D. 168 pp. Cloth, $1.75.

Detailed description of any of these books will be sent upon request.

Bureau of Publications
Teachers College
Columbia University
New York City

student-housing problem in almost every university in the country with the exception of Harvard and Yale. There are few Harknesses who may be expected to turn up with bequests for the hundreds of other universities and colleges which must house their students under the "education for the masses" theory. And so, the college boy and girl today are getting a "lesson in bankruptcy," with houses only half-filled, daily bills to meet, no money for repairs and upkeep, and mortgages and notes falling due which they are unable to pay off.

The undergraduate who sought refuge in a university to escape the Depression's chilly breath is finding a few economic icicles to harass his slumbers before the fraternal hearth this winter. The major burden of Fraternity Row's present difficulties has fallen on his shoulders, although he had no part in their making, not even the soul-filling satisfaction of autographing so many little slips of paper, acts which my classmates so enjoyed.

THE LIBRARY QUARTERLY

a journal of
—investigation
—discussion
in the field of
library science

Edited by
WILLIAM M. RANDALL

Published in
January, April,
July, October

$5.00 a year

The University of Chicago Press

Meets an important modern education objective—
the development and preservation of mental health in students

KEEPING A SOUND MIND

by PROFESSOR JOHN J. B. MORGAN
Northwestern University

This is the first textbook to formulate in language for the undergraduate the principles of mental hygiene which specialists have discovered. The student who has had no training in psychology will be able to understand it, and it will teach him, systematically and simply, the best ways to develop sound mental habits, to guard his mental health, to use his mental powers most effectively. It will be found an extremely valuable book for use in the freshman hygiene course, the "how-to-study" course, in a required course under the direction of the psychology department, or as reading to be recommended by the faculty adviser or the department of hygiene.

Price, $2.00

THE MACMILLAN COMPANY

60 FIFTH AVENUE NEW YORK